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الجامعة الأردنيــة
كلية الدراسات العليا

نموذج رقم (١٦)
إقرار والتزام بالمعايير الأخلاقية والأمانة العلمية
وقوانين الجامعة الأردنية وأنظمتها لطلبة الدكتوراة

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prevalence and psychosocial predictors of postpartum depression among active-duty Jordanian military women utilizing health care services

أعلن بأنني قد التزمت بقوانين الجامعة الأردنية وأنظمتها وتعليماتها وقراراتها السارية المفعول المتعلقة باعداد رسائل الماجستير والدكتوراة عندما قمت شخصيا" باعداد رسالتي / اطروحتي ، وذلك بما ينسجم مع الأمانة العلمية المتعارف عليها في كتابة الرسائل والأطاريح العلمية. كما أنني أعلن بأن رسالتي /اطروحتي هذه غير منقولة أو مستلة من رسائل أو أطاريح أو كتب أو أبحاث أو أي منشورات علمية تم نشرها أو تخزينها في أي وسيلة اعلامية، وتأسيسا" على ما تقدم فإنني أتحمل المسؤولية بأنواعها كافة فيما لو تبين غير ذلك بما فيه حق مجلس العمداء في الجامعة الأردنية بالغاء قرار منحي الدرجة العلمية التي حصلت عليها وسحب شهادة التخرج مني بعد صدورها دون أن يكون لي أي حق في التظلم أو الاعتراض أو الطعن بأي صورة كانت في القرار الصادر عن مجلس العمداء بهذا الصدد.

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PREVALANCE AND PSYCHOSOCIAL PREDICTORS OF POSTPRTUM DEPRESSION AMONG ACTIVE- DUTY JORDANAIN MILITARY WOMEN UTILIZING HEALTH CARE SERVICES

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This Dissertation was submitted in Partial Fulfillment of the Requirement of The Doctor of Philosophy Degree in Nursing Science

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COMMITTEE DECISION

This Thesis /Dissertation (Prevalence and Psychosocial Predictors of Postpartum Depression among Active-Duty Jordanian Military Women Utilizing Health Care Services) was successfully Defended and Approved on 21/7/2011

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DEDICATION

I dedicate this work to

My husband Sameeh Al-Tarawneh, for inspiring and providing me with the motivation to complete this work.

To my Lovely children

Mais, Mohammad, Soliman, Hebatoallah, and Salem who were source of encouragement and instilling ambition in me to continue every step of the way.

Thank You

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PREVALANCE AND PSYCHOSOCIAL PREDICTORS OF POSTPRTUM DEPRESSION AMONG ACTIVE- DUTY JORDANAIN MILITARY WOMEN UTILIZING HEALTH CARE SERVICES

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Abstract

There have been nondocumented studies on postpartum depression in active-duty Jordanian military women. The purposes of this study were to investigate the prevalence of postpartum depression and the psychosocial predictors of postpartum depression among active-duty Jordanian military women utilizing health care services. A cross sectional design was carried out with three hundred active- duty Jordanian military women utilizing health services from four military hospitals. Data were collected using self-report questionnaires that include four parts; socio-demographic data, postpartum depression as measured by Edinburgh Postnatal Depression Scale, perception of stress as measured by Impact of Event Scale-R, and social perception as measured by Multidimensional Perception Scale of Social Support. Data were analyzed using Statistical Package for social Science (SPSS) version 16.

The results of this study showed that 39.3 % of the participated women had mild level of postpartum depression, 27.6 % had moderate level of postpartum depression, and 15.7% had severe level of postpartum depression. Also, 50% of women had social support level less than the mean of social support (M= 57.05, SD= 13.09), and 50% of women had high level of perceived stress than the mean level of perception of stress (Mean 42.21, SD=12.32). There was positive significant correlation between postpartum depression and perception of stress ($r = .58$, $p<0. 01$), and negative significant correlation between postpartum depression with perception of social support ($r = - .37$, $p< 0.01$) of active-duty Jordanian military women. Monthly income, planning of pregnancy, mode of delivery, family social support, and intrusion and hyper arousal perception of stress were the strongest predictors of postpartum depression among the participants with accumulative R^2 (.52), R^2 change (.36).

The relationship between postpartum depression and the psychosocial variables was significant, postpartum woman's who had low level of perceived stress and satisfied social support had low level of postpartum depression. These findings emerged the need to address the psychosocial aspects of Jordanian military women by planning comprehensive interventional caring programs reflecting active-duty Jordanian military women's needs during their childbirth period and reproductive life to maintain their mental well being.

CHAPTER ONE

1. Introduction

Postpartum Depression (PPD) is recognized internationally as a mental health problem associated with childbearing. The literature purports postpartum depression as one of the most serious complications of childbirth which has a long term impact on women's mental and physical health, maternal health, infant development, and partner relationships. Women mental health is closely interwoven with physical health and it is as important as physical health. Postpartum Depression described as "a depressive mood disorders that occurs within six months after childbirth characterized by depressed mood, sleeping disturbances, eating disturbances, and lack of energy" (The DSM-IV, (American Psychiatric Association [APA]2000, pp, 386-387). Furthermore, Women with postpartum depression may develop severe anxiety, disinterest, and fearfulness of being with the infant or over intrusiveness that inhibits adequate infant rest (The DSM-IV (American Psychiatric Association [APA] 2005, pp, 423). Since the postpartum period is unique, postpartum depression can have a significant impact on women's health. Therefore, the postpartum period requires great attention to psychological aspect of women's.

Globally, it is estimated that depression will become the second most reported cause of disease burden in the world by the year 2020 (World Health Organization [WHO], 2000). Good mental health promotes good physical health, Jones (2008) reported that good mental health helps women to enjoy life and be able to cope effectively with challenges during their reproductive years where women have major challenges to meet their reproductive needs and to have balance between their body and mind to maintain high quality of health and well- being. For that availability of comprehensive evidence on women's specific needs and health challenges over their

entire life course is necessary to meet women needs. According to Miller (2002), the incidence of postpartum depression in women is greatest, during their reproductive years, ranging from 10%-20%. It was reported that postpartum depression is associated with disturbances in mother-infant relationships and has an adverse impact on a child's cognitive and emotional development (Beck, 1995). Additionally, it was reported that postpartum depression has an impact on mothering in which women become not able to read her baby's cues and failed to fulfill their baby's essential needs and less frequent interaction with her baby (Wiedman & Garfield, 2007).

Dennis & Letourneau, (2007) reported that there are several psychosocial factors contributing in the development of postpartum depression; in particular, the stressful life event and the low of perceived social support. Women regardless to their place of working are subjective to postpartum depression as long they were in the reproductive period. Military women are experiencing different stressors in their work places (more work hours, military assignment in addition to job assignment, and emergency situations) that may affect their health status; physically and psychologically. The prevalence of postpartum depression in military women received little attention in the literature (Rychnovsky & Beck, 2006). In Jordan, there is a lack of literature investigating the prevalence and psychosocial predictors of postpartum depression in military women. In this context, postpartum depression of military women is not addressed in the Jordanian health researches. Therefore, this study comes to increase our knowledge and understanding of postpartum depression in active- duty Jordanian military women utilizing health care services. In addition, it will serve to generate strategies for improving postpartum health care in the context of their workplace conditions.

1.1 Research Problem

Postpartum depression is recognized as a unique and serious childbirth condition where women have a diminished mood, lack of pleasure, loss of energy, low sense of self-worth, change in appetite, sleep pattern disturbance, and suicidal ideation (Gjerdingen, McGrovern, Miner, & Center, 2009) .Several stressors were reported during the reproductive years that compromise women's ability to cope and may contribute to the development of postpartum depression such as stressful life events, low social support, prenatal depression, and low self-esteem (Dennis & Leutourneau, 2007, Tommy& Alligood, 2006, pp, 750) .

The incidence of postpartum depression among Jordanian women ranges from 26.6% to 42% (Oweis, 2001, Salameh, 2006), and the incidence of postpartum depression among Arab-women ranges from 16% to 20% (Chaaya, et al, 2002; Ghubash, Abou-Saleh, & Daradkeh, 1997). However, military women were not part of the researchers' concerns when addressing postpartum depression. While internationally, military women were a target for a number of researches. For example, in the United States, 20% of the military women were reported to have postpartum depression (Appolonio & Fingerhut, 2008).

There are numerous bio-psychosocial and economic risk factors for symptoms of postpartum depression, and these include a history of mental illness, maternal age, socioeconomic status, lack of social support, an unplanned or unwanted pregnancy and infant health and characteristics (Alami, Kadri & Berrada , 2006; Aydin, Inadi, & Karabulut, 2005 ; Chaaya et al, 2002). Particularly among the Arab women, giving birth to a female, non-breastfeeding, plural marriage, place of residence and consanguinity were identified as risk factors of postpartum depression in Arab Women (Green, Broom, & Mirabella, 2006). Therefore, the problem of postpartum

depression is one of the main concerns for health care professionals caring for women pre and post natal for their expected impacts on women's and their children's health and wellbeing. A significant portion of women are those serving in military services. Military women have specific psychosocial constrains imposed by the nature of military services. Military women are consider active military ones whether they are in the battle fields or servicing as professionals have psychological and social-related life constrains. This makes military women vulnerable population and subject to number of psychosocial problems that may contribute to development of postpartum depression that than those women non-military ((Rychnovsky & Beck, 2006).

In conclusion, little is known about the prevalence and psychosocial correlates of postpartum depression among Jordanian military women. In Jordan, the literature is dearth in information regarding postpartum depression among military women whether they serve in battle or serve as professional. Therefore, there is a need to understand the correlates of postpartum depression and military women and further to investigate factors that may contribute to the development of postpartum depression among military women. The military life may provide us with different perspectives with regards to its influence on women in different setting serving as military ones. This study came to address this issue and further to extend our knowledge in predictors of postpartum depression and differences in postpartum depression with regards to demographic characteristics where some of them are military-related such as rank and field of Therefore, The ***purpose*** of the study was to investigate postpartum depression among active-duty Jordanian military women utilizing health care services.

1.2 Research Questions

1. What is the prevalence of postpartum depression among Jordanian military women utilizing health care services?
2. What is the relationship between selected socio-demographic variables, perception of social support, level of perceived stress, and postpartum depression in Jordanian military utilizing health care services?
3. What are the differences in postpartum depression in relation to socio-demographic variables, perception of social support, and level of perceived stress in Jordanian military women utilizing health care services?
4. What are the stronger predictors of postpartum depression in Jordanian military women utilizing health care services?

1. 3 Significance of the study

Postpartum depression is becoming a major public health issue all over the world and stated as a priority goal for Healthy People 2010, but still it is under recognized by health care providers. The results of such a research will increase understanding of the psychosocial needs of the military women to the factors that need to be addressed when planning for their care.. Postpartum depression can occur at any time during the first year after giving birth**.** The symptoms of postpartum depression includes behavioral symptoms such as depressed mood, helplessness, and persistent guilt, lack of concentration, social withdrawal, and loss of interest in self care. While physical symptoms include change in appetite, exhaustion or fatigue, and sleep disorders (Beck, 1996). The consequences of these health problems have negative impacts on women physical and mental health, and negative perception of child behaviors which may results in delaying child growth and development (Murray, Fieri-Cowley, Hooper, & Cooper, 1996). The negative impact of postpartum depression on women's

bio-psycho-social health is a topic of interest in global studies. Some international studies have indicated that approximately 6%–20% of active-duty military personnel meet the clinical criteria for a mental disorder, with lifetime prevalence estimates of approximately 40% (Logsdern, Wisner, & Foltz-pint, 2006). This indicates that mental health of military women is jeopardized with postpartum depression. The prevalence of postpartum depression among Active-duty American military women was 20% -36% (Appolonio & Fingerhut, 2008; O'Boyle, Magann, Robert, Doyle, & Morrison, 2005). This incidence is high compared to non-military American women. The reported factors contributing to the development of postpartum depression among those military women were; socio-demographic, inadequate social support, low self esteem, poor marital status, and life stress (Appolonio & Fingerhut, 2008). In Jordan, little is known about the prevalence and predictors of postpartum depression in active-duty military women. Also, little is known about how postpartum depression affects military women, and how women manage its consequent symptoms. Therefore, this study will come to increase our understanding about postpartum depression and the contributing factors in active-duty Jordanian military women utilizing health care services in context of early diagnosis and management of symptoms of postpartum depression to optimize military women's health through their reproductive period.

In addition, this study expected to enable Jordanian nurses, midwives, and other health care providers assess the symptoms of postpartum depression among those women early after childbirth to minimize the negative consequence on women health, infant development, and family roles. Moreover, the findings expected to enhance nursing inquiry and contribute to the theoretical foundation of reproductive health care practices.

Additionally, the findings of this study will provide impetus for nurse educators to integrate content on management of postpartum depression in their curricula. Nurse educators will be motivated to consider the psycho-social and mental health aspect of women during their childbearing years. This study also will provide policy makers in the military health care settings with baseline data that is reliable to guide them in the generation of policies and regulations to meet the needs of active-duty military women during their reproductive period health at the primary, secondary, and tertiary level of care.

1.4 Hypothetical Model

Beck's theory of Postpartum Depression will be used to guide the study. According to the theory postpartum depression is defined as " a nonpsychostic major depressive disorder with distinguish diagnostic criteria" (Tomey & Alligood, 2006, pp. 747). Beck's theory identified twenty significant risk factors (predictors) for postpartum depression and the effect size of each on the development of postpartum depression. According to Beck's theory person (postpartum woman) was described in term of wholeness has biological, sociological, and psychological components which must be understood in the context of family and within community. Moreover, postpartum women live in outside environment which includes events, situations, culture, physicality, and sociopolitical systems which all shape the women physical and mental health (Tomey & Alligood, 2006, pp. 751).

Within the context of Beck's postpartum depression theory, the development of postpartum depression is an explicit of these factors. Postpartum women are liable to develop postpartum depression if she exposed to all or some of these identified risk factors. The risk factors which included in this study were; life stress, social support, unplanned pregnancy, socio-demographic status, and suicidal thoughts.

Figure (1) shows that the perception of inadequate social support from (family, friends, and others), and perception of stress during the postpartum period by active-duty military women contributed to the development of postpartum depression. Also, women's socio-demographic variables (age, level of education, monthly income, and gender of the baby, age of the baby, military rank, job title, and work in shifts, mode of delivery, parity, and breastfeeding) are identified as predictors for the development of postpartum depression among the participants of this study.

The most postulate of this hypothesized model is that, women in the postpartum period are reliable to develop postpartum depression when they perceived high level of stress and receive inadequate social support with the contribution of the identified socio-demographic variables.

This study doesn't tend to test the suggested hypothetical framework; rather it serves as a guide in interpretation of relationships between study variables and to test the regression.

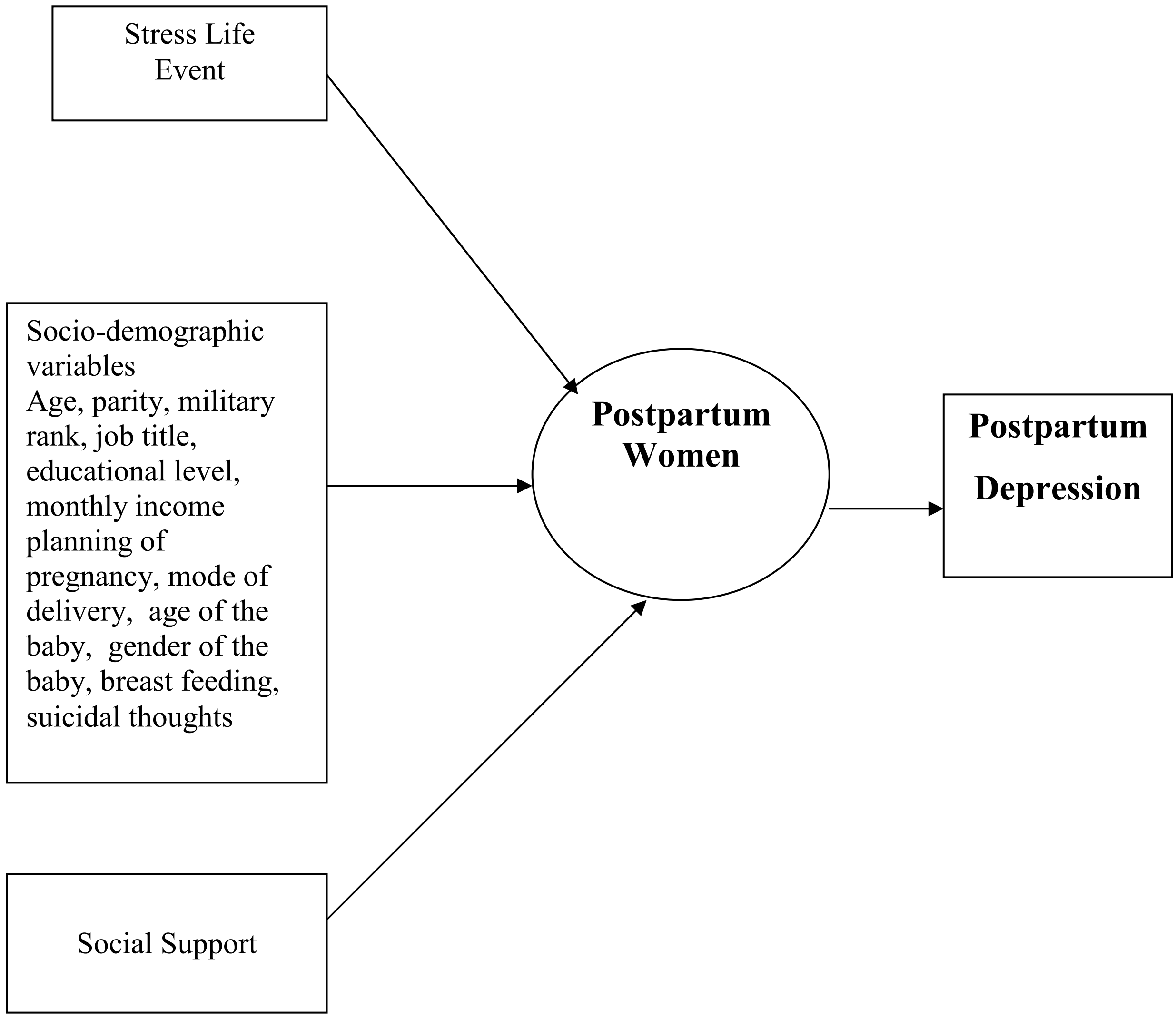


Figure 1: Hypothetical Model of developing Postpartum Depression among active-duty Jordanian military women

1.5 Variables of the Study

1.5.1 Postpartum depression

Conceptual definition: is an affective disorder which can begin at any time in the first weeks of delivery to one year after delivery, characterized by depressed mood, diminished pleasure, loss of appetite and sleep, fatigue, decreased concentration, and suicidal ideation (Beck 1995).

Operational definition: postpartum depression was measured by using Arabic version of Edinburgh Postnatal Depression Scale (EPDS). EPDS is a self reported questionnaire designed to detect postnatal depression. It consists of ten short statements with four possible responses (0-30) which measure the women feeling during the past weeks (Cox, Holden & Sagovsky, 1987). See appendix D

1.5.2 Socio-demographic Characteristics:

Conceptual definition: are the socio-demographic and maternal variables for the development of postpartum depression such as marital age, monthly income, educational level, military rank, job title, and working in shifts. Also, it includes planning of pregnancy, marital status, parity, mode of delivery, age of the baby, gender of borne child, and breast feeding.

Operational definition: They were measured by using the developed socio-demographic data sheet. See appendix B

1.5.3 Perception of Social Support:

Conceptual definition: defined by Shumaker & Browell (1984) as assistance protection given to individual. It is a subjective feeling of belonging, of being accepted or being loved by others.

Operational definition: Social support was measured by using the Arabic version of Multidimensional Perception of Social Support Scale (MDPSS) developed by Zimet,

Dahlem, Zimet, & Farley, (1988). (MDPSS) is a 12-item self-reported scale to assess the perception of social support adequacy from the family, friends, and significant others such as health care team. (Zimet, Dahlem, Zimet & Farley, 1988). Each item measures the adequacy of social support using a 7-point likert scale ranging from 1(very strongly disagree) to 7 (very strongly agree). The total score ranges from 12 to 84. The scale has three sub scales: family (items 3, 4, 8, 11), friends (items, 6, 7, 9, 12), and significant others (items, 1, 2, 5, 10). See appendix I.

1.5.4 Perception of Stress:

Conceptual definition: Stress is any event or situation which appraised by the individual as threatening, harmful or taxing individual's available resources (Lazarus &Folkman, pp, 182, 1984).

Operational definition: Perception of stress was measured using the Arabic version of Impact of Event Scale –Revised (IES-R). It is a self-reported scale designed to measure current subjective distress in relation to a specific stressor (Weiss & Marmar, 1997). The items describe episodes of distress in those who had experienced a recent stressful life event. This scale consists of 20 items, distributed on a 5 Likert-scale including: (0) Not at all for negative endorsement, (1) a little bit, (2) moderately, (3) quit a bit, and (4) extremely indicating high levels of distress (positive endorsement). This scale has three subscales; intrusion, avoidance, and hyper arousal subscales. The total score on traumatic stress is derived from the sum of all items (0- 80). The scoring on the subscales is: Intrusion subscale (0-32), avoidance subscale (0-28), and hyper arousal subscale (0-20). A total score of > 40 is indicative of a significant stress response. See appendix F.

1.5.5 Active-Duty military personnel: Are men and women currently in uniform and being paid. Active duty doesn't mean combat duty; combat duty means working in an actual war zone (Tim Christopher, eHow, 1999).

1.5.6 Active-Duty Jordanian military women: Jordanian military women, wearing military uniform, having military ranks, under military orders, and currently working in different military branches of Jordan Armed Forces and (not retired).

1.6 Summary

This chapter presented introduction (background) and significance of postpartum depression among active-duty Jordanian military women utilizing health care services. The study purpose and questions, variables definitions and the hypothetical model were presented.

CHAPTER TWO

Literature Review

2. Introduction

Postpartum depression is becoming a major public health issue; unfortunately it is unrecognized by women and by healthcare providers. Women in the military face different work situations than civil women do. These situations (more work hours, military assignment in addition to her job assignment, and emergency situations) keep the women under stress which may result in negative physiological, psychological, and social outcomes (Appollonio & Fingerhut, 2008). Additionally, childbearing military women are a vulnerable group and may develop postpartum depression because of the changes occurring during pregnancy, birth, and after childbirth which may result from work stressors and other variables. This chapter provides the literatures on postpartum depression and the influence of socio-demographic and psychosocial variables in the development of postpartum depression.

2.1 Jordanian Military Women

Early in 1950’s , and by the guidance and auspice of His Majesty King Hussein Bin Talal fruitful efforts were carried out to enrolled Jordanian women in the Jordanian Armed Forces (JAF) and to have the responsibility of defending their homeland. The guidance and continued support enabled the Jordanian military women to carry out their responsibilities by preparing, rehabilitating, and training in the military duties.

The first military task in military field for Jordanian military women was in the school of education. After the foundation of Princess Muna College of Nursing in 1962, Jordanian women were enrolled in this college with small numbers (8 women), whom they had diploma degree in nursing and after finishing their study they hold Lieutenant Rank in the Directorate of Royal Medical Services.

Establishment of the Directorate of Military Women Affairs in late 1995 highlights the roles and responsibilities of Jordanian women in Jordanian Armed Forces. The responsibility of this directorate is to provide opportunities and availability of jobs in various locations inside and outside the Hashemite Kingdome of Jordan. Attention to all aspects of military women's health during their military services. Areas of women's work in Jordanian Armed Forces; education, health care professions (Royal Medical Services), Navy, Royal Air Forces, secret job security, Royal Guard, Air Defense College, and others. In 2010 was the first participation of Jordanian military women in the peace-keeping forces as a military nurse (providing health services) and a trained military service (Jordan Armed Forces).

2.2 Postpartum Depression

The postpartum period is a period during which women are vulnerable (Linter & Gray, 2006). Postpartum depression is a serious mood disorder affecting many women from diverse culture. There are three terms used to describe perinatal mood disorders these are; 1) Postpartum blues which is an adjustment disorder with depressed mood. It is estimated to occur in 50-90% of child bearing women resulting from rapid changes in hormone levels and role transition. It occurs immediately after giving birth (4-5 days) and may persist up to six weeks. Postpartum blues are characterized by rapid changes in mood, episode of tearfulness, irritability, anxiety, and feeling of overwhelmed, 2) Postpartum depression is an affective disorder. Its onset is within four weeks after giving birth and may be manifest through 12 months of childbirth. PPD is characterized by change in appetite, change in sleep pattern, with energy depletion, feeling of worthlessness or guilt, concentration difficulty, recurrent thoughts of suicide, 3) Postpartum psychosis is the most serious postpartum disorder which requires immediate treatment. It is a rare condition of experiencing psychotic symptoms within three weeks

of giving a birth. This condition associated with mood disorders like depression and bipolar disorder like experiencing false belief, hallucination, also inability to sleep, agitate, and mood swings (Lintner & Gray, 2006).

2.2.1 Etiology of Postpartum Depression

In literature, it is reported that there is no single cause of PPD. It is a multifactorial disorder caused by: 1) Biological variables, estrogen and progesterone changes during pregnancy and early after birth causing mood changes. Changes in the adrenal steroids and prolactine hormone contribute to postpartum mood changes. 2) Psychosocial variables are other factors contributing to the development of PPD including self-esteem, role transition, demographic variables, marital age, financial variables, and maternal educational level. 3) Interpersonal variables, including family interaction, partner support, marital satisfaction, and maternal problems before and after childbirth. 4) Obstetrical variables including parity, obstetrical experiences, mode of delivery, infant characteristics and illness, and birth order (Kruckman & Smith, 2001).

2.3 Postpartum depression internationally

Dinar and Erdogan (2007) reported that the prevalence of symptoms of postpartum depression and risk factors for developing PPD depression among Turkish women using Edinburgh Postnatal Depression Scale (EPDS) was 45.5% 2 months after childbirth and 48.5% at 7-12 months after giving birth. Seventeen independent variables are highly correlated with elevated scores of EPDS. Having a history of mental illness was the highest risk factor, and there were high level of symptoms of PPD in women giving birth to a daughter.

Rubertsson, Waldenstrom, Wickberg, Hildingsson, & Radesad (2005) conduct their study on 2674 Swedish-speaking women whom completed Edinburgh Postnatal Depression Scale with cut-off (11/12) in early pregnancy and two months after delivery.

The results reported that in all 12.3% scored above the threshold postpartum depression; 5.8% of women in pregnancy and postpartum, 6.5% in postpartum. Moreover, the study revealed that unemployment, lack of support and physical health problem were associated with depression symptoms in both groups (during pregnancy and postpartum). Goyal, Murphy, & Cohen, (2006) determine the incidence of postpartum depressive symptomology in a convenience sample of immigrant Asian women in Northern California. Postpartum depressive symptoms among the participants were measured using Postpartum Depression screening Scale between two weeks and twelve months postpartum. The results revealed that 28% of women reported to have minor depressive symptoms while 24% of women had major depressive symptoms.

Logsden, Wisner, & Pinto-Foltz, (2006) in their research they explain how postpartum depression impacts the roles of mother in ensuring infant's safety, survival and well-being. Also, the study aims to explain the impacts of postpartum depression on maternal-child interaction which resulting in long-lasting adverse effects on children's cognitive and emotional development. The researchers claim the importance of education about postpartum depression with the community and the women to decrease stigma and promote greater mental health services utilization. In a study conducted by Segre, O'Hara, Arndt, & Stuarts (2007) they reported that 12% was the prevalence of postpartum depression among the participated sample using Inventory Diagnosis Depression Scale. Moreover, the results revealed that monthly income, occupational prestige, age, marital status and number of children are significant demographic predictors of postpartum depression. The study explains the role of financial poverty in the development of clinically significant depressive symptoms.

Kim, Hur, Kim, & Shin (2008) in their prospective study using Edinburgh Postnatal Depression Scale (EPDS) Korean version, measure the incidence of postpartum

depression among the participants. The participants were thirty women with score □□ 9.5 on EPDS during 24 week of pregnancy, one week and 6 weeks after delivery. Beck Anxiety Inventory (BAI) was used to measure the anxiety level, Childcare Stress Inventory (CSI) used to assess stressful postpartum depression related to childcare and, Marital Satisfaction Scale (MSS) was used to evaluate women satisfaction with their marriage and spouse. The results showed that marital satisfaction and postpartum depression are significant at 24 weeks, while anxiety level has significant differences at 24 weeks of pregnancy and at one week postpartum.

Another prospective study conducted by Kirpinar, Gozum,& Pasinlioglu (2010) aims to estimate the prevalence of postpartum depression and the correlated factors. Four hundred and seventy nine pregnant women were screened for postpartum depression during their third trimester of pregnancy and at one and six weeks after delivery using Edinburgh Postnatal Depression scale (EPDS). The results showed that the prevalence of postpartum depression was 17.7% at first week and 14% at sixth week. Also, the results showed that psychiatric history during pregnancy, prenatal anxiety, poor marital relation were significant in the first week while lack of contraceptive use were correlated with postpartum depression at one and sixth week of postpartum period.

Another study documented the prevalence and risk factors for developing postpartum depression in Turkish women (Aydin, Inadi & Karabulut, 2005), especially in the second, seventh, and twelfth postpartum weeks. The reported prevalence of symptoms of postpartum depression ranged from 30.6-50.8%. Study results revealed that low socio-economic status, inadequacy of maternal health services, and high fertility contributed to the high prevalence of PPD. Lack of parental support, infant

disease, and a history of mental illness before or during pregnancy were risk factors for developing symptoms of PPD among the participants.

Kara, Unalam, Cifcili, Cebeci, & Sarper (2007) conducted their cross sectional study using Beck Depression Inventory which was fully completed from 326 Turkish women. The total sample was divided into two groups; first group postpartum women (n=163), and second group non postpartum women (n=163). The results of the study reported that the prevalence of depressive symptoms was 17% in the postpartum women and 28% in non postpartum depression women. Also, the results showed that premenstrual tension and a history of depression were risk factors for depressive symptoms in non-postpartum women, while breast feeding is not significant in non-postpartum women. Moreover, multiparty and history of induced abortion were significant risk factors in postpartum women.

2.4 Postpartum Depression among Arab Women

The prevalence of PPD and the identification of risk factors of developing PPD among Arab women were studied. The studies investigated the prevalence of PPD in Arab women and identified the risk factors associated with the development of symptoms of PPD. Green, Broom and Mirabella (2006) conducted their study in which 125 Emirati women participated giving their birth in governmental maternity hospital in Abu Dhabi. The purpose of the study was to identify the prevalence of PPD and the related socio-cultural and physical factors for the development of symptoms of PPD in Arab women from the United Arab Emirates (UAE). This study used the Arabic version of Edinburgh Postpartum Depression Scale (EPDS). The participants completed the screening scale at 3 and 6 months after giving birth. It was reported that 22.1% of women had symptoms of PPD (score above 13), 22% had borderline of postpartum depression (score 10-12), and 55.8% had few symptoms of

postpartum depression (score below 9) at the third month after giving birth. At 6 months after giving birth; 19% had borderline scores of postpartum depression, and 67.9% had few symptoms of postpartum depression. Emirati women reporting poor relationships with their mother-in-law, women not breastfeeding, and women having negative body image had significantly higher scores of postpartum depression. Plural marriage, place of abode (living area), consanguinity, maternal age, working outside home, educational level and socioeconomic status were not risk factors for the development of symptoms of postpartum depression.

Chaaya and associates (2002) assessed the prevalence of postpartum depression and the risk factors contributing to the development of PPD in Lebanese women living in Beirut and Bekaa Valley using the Arabic version of Edinburgh Postnatal Depression Scale (EPDS) and structured face to face interviews. The women were asked to recall data about their newborn and immediate postpartum period. Then the women were asked about their experiences during labor and birth and described their prenatal history. The prevalence of symptoms of PPD was 26% in women living in Bekaa Valley, and 16% among women living in Beirut. Low levels of social support and depression during pregnancy related to the development of symptoms of PPD among both groups. Women living in Bekaa Valley having caesarean births had a prevalence of 37% symptoms of PPD compared to 23% having a vaginal birth. The prevalence of developing symptoms of PPD in women living in Beirut having caesarean births was 7% with 21% who had a vaginal birth. Women in both groups with low educational level reported higher EPDS scores. Parity and the planned pregnancy were not significant variables associated with PPD in both groups. The results reported also that depression and chronic illness during pregnancy are highly significant with the development of PPD among both groups.

Alami, Kadri, and Berrada (2006) determined the prevalence of symptoms of PPD in 100 Moroccan women. The study was conducted in a primary healthcare setting providing maternal and infant care in Casablanca. The participants were recruited at their first trimester of pregnancy and followed 9 months after giving birth. In the first trimester, demographic data, obstetrical and medical history, and psychiatric data were collected by the researchers using semi-structured interview. The researchers used Mini International Neuropsychiatric Interview (MINI) (Moroccan Arabic version) to assess depression during pregnancy and postpartum. The Edinburgh Postnatal Depression Scale (EPDS) was used to detect PPD. The Paykel Life Events Inventory was used to identify the stressful stressors during pregnancy and postpartum. The prevalence of depression during pregnancy was 19.2% (31 women), Twenty-one women continued to have depression after giving birth. The prevalence of symptoms of PPD as measured by (EPDS) was 21% with score more than twelve. There are significant relationships between poor marital relationship, lack of parental support, and violence with the development of depression during pregnancy. Women having stressful-life event and babies with health problems had symptoms of PPD. Demographic data were not significantly associated with the development of depression during pregnancy and postpartum.

2.5 Postpartum Depression among Jordanian Women

Few studies have been conducted in Jordan to assess the prevalence of postpartum depression and the identification of the risk factors contributing to the development of postpartum depression among Jordanian women. Oweis (2001) conducted a study to test the relationships between stress of childbirth, length of labor, nursing support and the development of PPD among Jordanian primiparous women. Two hundred and seventy eight women participated in the study. The prevalence of postpartum depression

was 26.6% among the participants with score of 13 or above on EPDS Arabic version. The study found that women who gave birth to a daughter, who had a low level of maternal educational, low socioeconomic status, and had a normal vaginal birth, had significant symptoms of PPD. Another study is the one conducted by Salameh (2006). The study was conducted on three hundred Jordanian women from four mother-child health centers in Amman to determine the prevalence of PPD. Edinburgh Postnatal Depression Scale (EPDS), Arabic version was used to measure the prevalence of postpartum depression among the participated women. The results reported that 42% of the participants scored 13 or above on the EPDS which indicated a symptoms of postpartum depression. Moreover, stepwise multiple regressions revealed that parenting stress, perceived postpartum stress, perceived stressful relationships were significant predictors of PPD among study participants.

2.6 Postpartum Depression among Military Women

Rychnovsky and Beck (2006) conducted a longitudinal prospective study for screening of postpartum depression with a convenience sample of 109 American- active military women (USA army, Navy, Marine Crops and Air force) in a large California military hospital. Data were collected in the early days before hospital discharge, two weeks after hospital discharge, and at 6-8 weeks postpartum. They used the Postpartum Depression Screening Scale (PDSS), which is 35-item - self-report scale used to measure the depressive symptoms in postpartum period on the three points of data collection. For the second and third points of data collection, instruments were mailed to women two days before their maternal postpartum checkup. Findings indicated that 50% of women had significant levels of symptoms of PPD after giving birth; 13% had a positive screening on the second week after giving birth, and 11% had symptoms of PPD on the six week after giving birth. On the 6-8 week 40% of women still had

symptoms of PPD. Women under the study reported to have experiences of sleep disturbances, eating disturbances, and anxiety. Suicidal thoughts were not reported by the participants. The researches concluded that military women need screening during pregnancy for early identification of the risk factors and early interventions after childbirth.

Appolonio and Fingerhut, (2008) sought to determine the incidence of PPD among American military women and to identify the demographic and psychological risk factors associated with the development of symptoms of postpartum depression after childbirth. Eighty seven military women participated in the study. Fifty percent were Caucasian, 61% were active duty in the Air Force with average of forty six days for maternity leave. Three tools were used to collect the data; Edinburgh Postnatal Depression Scale (EPDS) to detect postpartum depression among the participants, the modified Postpartum Depression Inventory-Revised (PDI-R) to identify the risk factors contributing to the development of postpartum depression, and a background questionnaire which was developed by the researchers to identify military factors that could be associated with the symptoms of PPD. Study participants completed the instruments online. There was a 20% incidence of PPD. Low self-esteem, prenatal anxiety, and prenatal depression, history of previous depression, social support, poor marital relationship, infant temperament, and child care stress were psychological factors contributing the development of PPD among study the participants. Income and unexpected pregnancy were not significant variables related to PPD. There was no association between military specific factors (rank, years of serving in military, living in military houses, and the branch of the military) and developing symptoms of PPD. The investigators concluded that understanding the factors contributing to the development of PPD in military women help health care providers to develop health

programs for early detection and treatment to maintain well-being among those women.

Hass and Pazdernik (2006) investigated the association between stress, birth outcomes, and partner deployment of pregnant women during wartime on their postpartum period. Cross-sectional survey was used to collect data from 95 women. The women were asked to answer the questions in the survey which specifically measure the stressors during their pregnancy and the effect of their partners' deployment on their postpartum period. The results indicated that 92% of women who had vaginal births were supported by their partner and had less stress while laboring and giving birth. No significant differences were documented in relation to the gestational age, birth weight, duty status, and number of children at home. Some women reported high levels of stress during pregnancy associated with changes in their eating habits. The results of the study imply the important of assessment for depression during pregnancy for women having partners who are deployed during wartime.

O'Boyle, Magann, Doyle, and Morrison (2005) determined the prevalence of PPD in active-duty military women, comparing them with non-military women, and the identification of risk factors for developing of PPD. Edinburgh Postnatal Depression Scale (EPDS) was used for screening during pregnancy and postpartum. Seventy one questionnaires were completed during pregnancy and 26 questionnaires were completed after giving birth. The EPDS score of 12 was considered positive so women were referred for health care. Twenty-four percent of the study participants had a positive screen for PPD with an 11% incidence of suicidal ideation during pregnancy. Nineteen percent screened positive in the postpartum period with 15% of suicidal ideations. The results highlight the importance of screening for depression during pregnancy so early

treatment can be developed and continue after giving birth for the active- duty military women to prevent the negative impact on their health and well being.

2.7 Theoretical Background

Beck's Postpartum Depression Theory was developed in 1993 by Cheryl Tatano Beck used grounded theory based on symbolic interactionism. Interactionsim explains that human behaviors and interactions in the context that human behaviors and interaction is as a dynamic and complex processes. Furthermore, Beck claims that understanding of postpartum depression in women's is important to be in the context of medical disease model, social, and economic context (Tomey & Alligood, 2006, pp.746).

Beck's Postpartum Depression Theory has many concepts which considered as significant predictors for the development of postpartum depression among women after childbirth. These are:

1) Postpartum depression which is a no psychotic major depressive disorder begins early at four week after birth, but may occur at any time within the first year after delivery. 2) Loss of control which experienced by women through her life and it is different from group of women and other group. This loss left the women unstable through their postpartum period which may result in postpartum depression. 3) Prenatal depression which may occur at any time during pregnancy. 4) Child care stress which are related to child care after delivery. 5) Life stress includes stressful life events which may positive or negative. 6) Social support which includes emotional and instrumental support in woman's social system (husbands, family, and friends). 7) Prenatal anxiety refers to the woman's feeling of apprehension during pregnancy. 8) Marital satisfaction concerned with woman's satisfaction with her marriage. 9) History of depression before this pregnancy. 10) Infant temperament refers to infant has

difficult personality. 11). Maternity blues which may affect the women after birth. 12) Self-esteem refers to woman's feeling of self worth, acceptance and confidence in evaluating self. 13) Socioeconomic status which includes woman's education, income, and job. 14) Unplanned/ unwanted pregnancy which indicates that the woman not planned to have pregnancy.

Beck (1993) in her theory identified four stages for the development of postpartum depression after childbirth. These stages are;

1) Encounter terror, it happened suddenly beings within the first few weeks postpartum. In this stage the women suffering from anxiety, obsessive thinking, and being frightened.
2) Dying of self, in this stage the women complain of feeling disconnected from the world around them, socially isolated. Women may have self destruction as a result of overwhelming and may have thoughts of harming themselves or their babies.
3) Struggling to survive, where women seek support from surrounding people, or health care providers to help her. Here, the women feel comfort in communicating their distress to a higher person to help them regain their control. 4) Regaining control is the final stage of postpartum depression process. In this stage, the women reporting that they gradually pass into this stage and become to realize the needs of their babies, selves, and other family members.

Beck (2001) conducted a meta-analysis of predictors of postpartum depression. She reported that the identified predictors have different significant correlation in the development of postpartum depression; prenatal/pregnancy depression, low self esteem, life stress, low social support, and child care stress contributed with 0.36-0.46 effect size. While, poor marital status, history of previous depression, infant temperament, low socioeconomic status and unplanned/unwanted pregnancy have effect size ranges from

0.17-0.39. Moreover, Beck (2002) reported that harming self (suicidal thoughts) by postpartum woman is a symptom of postpartum depression which has impacts on woman's health and needs to be measured during the postpartum period. Beck realizes that one or more of these predictors may contribute the development of postpartum depression among postpartum women.

2.8 Summary

The literature discussed the etiology of postpartum depression and the identification of risk factors contributing its development. The reviewed literature reported that postpartum depression is a multifactorial disorder and better understanding the pathophysiology process of PPD and the identification of risk factors are helpful in developing a conceptualized- coordinated multidisciplinary approach to provide appropriate interventional health care based on best practices in the context of women wholeness. The reviewed studies have been shown that postpartum depression affects women at a crucial time. Socio-demographic, maternal, and psychosocial variables and their explanation in the development of postpartum depression were discussed in some reviewed studies. But, it is important to get more insight on how these influencing factors predicting the development of PPD among active-duty Jordanian military women utilizing health care services.

CHAPTER THREE

Research Design and Methodology

3. Introduction

The purpose of this study was to investigate the prevalence and predictors of postpartum depression among Jordanian military women utilizing health care services. This chapter describes the research design, sample and setting, the procedure and protocol of collecting data, instruments and questionnaires used to collect data.

3.1 Study Design

A cross sectional descriptive design was used to examine a predictive relationship between postpartum depression, perception of social support, level of stress and socio-demographic variables, among active-duty Jordanian military women utilizing health care services. In this study the socio-demographic variables (age, level of education, monthly income, and sex of baby, age of the baby, breast feeding, military rank, job title, mode of delivery), social support (the perception of family , friends and other support), and perceived stress level are the predictors for the development of postpartum depression among active-duty Jordanian military women. Data were collected using self-administered questionnaires completed by the participated women.

3.2 Population

The target population of this study was the active-duty Jordanian military women serving in Jordan Armed Forces (JAF) utilizing health care services. The accessible population is the active-duty Jordanian military women utilizing health care services who attended to the pediatric clinic for child care or maternal clinics for postpartum care at the military hospital.

3.3 Sample and Sampling

A convenience sampling technique was used to recruit the active-duty Jordanian Military women utilizing health care services. The *Inclusion criteria* include, active-duty military women serving utilizing health care services who gave a live health baby, within the first year of birth, and able to read and write Arabic language. The *exclusion criteria* include; military women who have history of medical complications during pregnancy, and did not have a living newborn. A convenience sample of three hundred and thirty active-duty military women utilizing health care services was recruited.

3.4 Sample Size

Sample size was estimated prior to data collection using G. power 3.03 using medium effect sizes 0.10, at power of 0.80 at 0.05 2-tailed level of significant. The estimated sample size was at least 231 with expected 21 predictors (socio-demographic and psychosocial). Data were collected from 300 active-duty military women utilizing health care services.

3.5 Setting

A convenience sampling technique was used to select the settings. Military hospitals are distributed all over the Hashemite Kingdome. Four Military hospitals were selected. These military hospitals are directed by the Directorate of Royal Medical Services. All of these hospitals provide general medical, surgical and maternal-child health services. Free perinatal care services are provided for all military women attending these hospitals including prenatal care, childbirth and intranatal care, postnatal care and family planning. Neonate and child health care services are provided for babies of the military women without cost including new born examination and screening, vaccination, and medical and surgical health services.

3.6 Ethical Considerations

Prior to data collection, ethical approval was obtained from the Scientific Research Committee at the Faculty of Nursing, University of Jordan. In addition, the institutional permission was obtained from Institutional Review Board in the Directorate, of Royal Medical services to conduct the study in the maternal and child clinics at the selected four hospitals (appendix A).

3.7 Informed Consent

The participant's permission to participate in the study was assured before data collection by reading the cover - explanatory letter. In addition to the information in the questionnaires that help the participants to feel confident in the process of this research. It also explained the purpose of the study, identified the researchers, and encouraged the participants to ask questions and seek clarification. The collected data were kept in secured locked place and was used by the researcher for the purpose of the study (Appendix A).

3.8 Data Collection Procedure

The targeted hospitals were contacted to ask for their permission to collect data from women in the maternity and pediatric clinics. The letter to the selected hospitals included a request to assign private room where women completed the questionnaires. The researcher visited the maternity and pediatric clinics and met the head of these clinics to provide them with information about the purpose of the study and the procedure of data collection to assure their help in the process of data collection. Women who agree to participate in the study were asked to read the cover letter which included information about the title of the study, its purpose, its significance and a statement informing the participants that their privacy was protected by assuring their responses which were treated confidentially, and information that reveal their identity

was not recorded. The whole package was in Arabic. Data were collected from the women visiting the maternal and pediatric clinics and the time for filling the questionnaires took 25-30 minutes. Data were collected over two months July-August 2010.

3.9 Measurement

3.9.1 Edinburgh Postnatal Depression Scale (EPDS): It is a self reported questionnaire designed to detect postnatal depression. Boyd, Le, and Sombreg (2005) reported that EPDS is the most extensively studied measure for postpartum depression. The scale consists of ten short statements with four possible responses which measure the women feeling during the past weeks. The scale's statements describe depression symptoms. Each statement has four responses (0-3) with total scores (0-30), (Cox, Holden & Sagovsky, 1987). This scale was used in Arabic studies; Ghubash, Abou-Saleh, and Daradkeh used the Arabic EPDS on an Arabic sample finding that with a cut-off score of 12, the sensitivity was 73% and the specificity was 90%. Using a cut-off score of 10, the sensitivity was 91% and the specificity decreased to 84%. The internal reliability was 0.84% (Cronbach's alpha). Oweis (2001) reported a Cronbach's alpha of 0.87 when used to test for PPD in Jordanian women. In another study with a Jordanian sample, Salameh (2006) reported a Cronbach's alpha of 0.82 with the Arabic version of the EPDS. The Arabic version of EPDS was used in this study with Cronbach's alpha of 0.85. In this study scores were divided into four score, these are; < 10 on EPDS (no postpartum depression), 10-15 (mild postpartum depression), 16-20(moderate postpartum depression), and 21-30 (severe postpartum depression), (Cox, Holden & Sagovsky, 1987) (Appendix E).

3.9.2 Impact of Event Scale-Revised (IES-R):

It is a self-reported scale designed to measure current subjective distress in relation to a specific stressor (Weiss & Marmar, 1997). The items describe episodes of distress in those who had experienced a recent stressful life event. It consists of 20 items, distributed on a 5 Likert-scale including: (0) Not at all for negative endorsement, (1) a little bit, (2) moderately, (3) quit a bit, and (4) extremely indicating high levels of distress (positive endorsement). This scale has three subscales; intrusion subscale which has the following items (1,2,3,6,9,14,16,& 18), avoidance subscale consists of the following items; (5, 7, 8, 11, 12, 13, & 20) , and hyper arousal subscales which consists of the following items (4, 10, 15, 17, & 19). The total score on this scale is derived from the sum of all items (0- 80). The scoring on the subscales is; Intrusion subscale (0-32), avoidance subscale (0-28), and hyper arousal subscale (0-20). A total score of > 40 is indicative of a significant stress response. In this study IES-R Arabic version was used to measure the experience of stress life event among the participants. The scale reliability was tested which reported 0.86 Cronbach's alpha . 0.86. (Appendix F).

3.9.3 Multidimensional Perceived Scale of Social Support (MDPSS):

It is a 12-item self-reported scale used to assess the perception of social support adequacy from the family, friends, and significant others such as health care team (Zimet, Dahlem, Zimet & Farley, 1988). Each item measures the adequacy of social support using a 7-point likert scale ranging from 1(very strongly disagree) to 7 (very strongly agree). The scale has three sub scales: family (items 3, 4, 8, 11), friends (items, 6, 7, 9, 12), and significant others (items, 1, 2, 5, 10). The total score ranges from 12 to 84, the higher the score, the higher the perceived social support. Numbers of procedures were used to determine the reliability and validity of the tool. The tool was first translated into Arabic language by a research assistant and back translated into

English language another independent research assistant as described by Brislin (1970) and Champan and Carter (1979). Two English forms (the original and the translated) were compared in terms of conceptual rather than literal meaning of items. The translator and the back translator met to examine the difference in the two forms. Pilot testing was conducting using military women (n=20) who are requesting for the appropriateness of translation. Reliability tested using Cronbach's alpha, the scale reported to have 0.87. (Appendix H).

3.9.4 Socio-demographic Data Sheet:

The socio- demographic characteristics in this study were chosen by the researcher based on the reviewed studies. The included data were; age, marital status, education, military rank, and military job, working in shifts, and monthly income, parity, planning of pregnancy, mode of delivery, and age of the baby, and gender of baby and breast feeding. These characteristics were identified in other studies as being predictors of postpartum depression. (Appendix B).

3.10 Data Analysis

3.10.1 Descriptive Statistics:

The computer program Social Statistical Package for Sciences (SPSS) version 16 windows was used to describe the socio-demographic variables, perception of social support, perception of stress, and postpartum depression. Central tendency measures (means, and medians) and the dispersion measures (standard deviation and ranges). The estimated descriptive statistics were compared to normative sample in the literature. Also descriptive statistics was used to identify the socio-demographic characteristics of the active-duty military women utilizing health care services.

3.10.2 Inferential Statistics:

Person correlation coefficient (*r)* was used to test the correlation between the socio-demographic variables, perception of social support, perception of stress and the postpartum depression. It measures the strength of association between the variables but not express causal association. One way ANOVA was used to test the differences in forms of postpartum depression in relation to selected socio-demographic variables, perception of social support, and perception of stress among active-duty Jordanian military women utilizing health care services. To explore the differences in postpartum depression in relation to socio-demographic variables and psychosocial variables, Post Hoc test (Tukey HD) was used**.** Furthermore, t-test was used to examine differences in postpartum depression and psychosocial variables in relation to dichotomous socio-demographic variables.

3.10.3 Treating Missing Data:

The data was screened for missing data. The missing data were assessed for its pattern, degree and reasons for missing data. There were no missing data.

3.10.4 Treating Outliers and Extreme Values:

Scatter plots and histograms were used to determine the outliers and extreme values. There were no outliers and extreme values and the observations are found to be accurately entered. Statistics was checked for skewness.

3.10.5 Multiple Regression Analysis:

Was used to address the second questions. Two-step hierarchal regression analysis was used to answer this research question. This type of analysis used to assess the ability of sets of independent variables to predict the dependent variable. Moreover, to assess the relative contribution of each model of variables in what adds to the prediction of dependent variables after controlling the previous variables. To ensure meeting of all

assumptions for the used analysis; the variables were tested for outliers, multicollinearity and homoscedasticity

3.11 Summary

The study used a cross sectional descriptive design of convenient sample consists of three hundred active-duty Jordanian military women utilizing health care services within the first year after childbirth. The data was collected by using Arabic package of valid and reliable self- reported questionnaires. Collected data was treated for any missing data, and checked for skewness.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the descriptive results of the socio-demographic variables, and the perception of social support, and perception of stress and their subscales. Also, the chapter provides the results of inferential statistics related to relationship between postpartum depression and the psychosocial variables and the selected variables. Two-step multiple hierarchal regression analysis used to identify the strongest predictors of postpartum depression among the participants.

4.2 Demographic Characteristics

Three hundred and thirty active –duty military women utilizing health care services were initially selected to participate in the study. Of those, 300 women were eligible and meet inclusion criteria resulted in a response rate of 90%, which was completed within a period of two months starting July 2010 to August 2010. The analysis showed that the mean age of participating women was 29 years (SD = 5.3) ranging from 18 to 46 years. As shown in table 1, most of the women (99.7, % n = 299) were married and .3% (n =1) was divorced. Regarding their parity; 28.7% (n =86) were prime, while the rest 71.3% (n = 214) were multipara.

Regarding educational level, 56% (n =168) of the women have a bachelor's degree, 42.7% (n = 128) have college (diploma degree) and 1.3% (n =4) have school level. About 46.7% (n = 140) of them reported that their monthly income is more than 500 JD, 25% (n =75) with monthly income range from 401-500, 22 % (n = 66) with monthly income range from 301-400, while 6.3% (n = 19) have less than 300 JD of income. Around 78% (n = 234) of women living separately with husband and children, 20% (n = 60) living with husband's family, and 2% (n = 6) living with woman's family. Regarding

military rank, the officers represent about 93% (n = 279) while enlisted were representing 7% (n= 21). Around 76% (n= 228) of the sample were nursing staff while 13% (n = 39) were from other health profession and 11% (n = 33) were non health professions. Most of the women 70.3%, (n = 211) are working in shifts (day-evening and night) while 29.7% (n =89) not working in shifts. Around half of them 58% (n =174) reported that their husbands are military person while 42% (n = 126) non military husband.

About 66.3 %(n = 199) of the women had planned their pregnancy while 33.7% (n =101) have unplanned pregnancy. In term of the age of the baby, the results showed that 36.7% (n = 110) were below four months, 26.6% (n =80) were between 4-8 months, and 36.7% (n = 110) were more than 8 months. Around half 51% (n = 153) of those infants were female, and 49% (n =147) were male. In addition, 60.3% (n = 181) of women had normal vaginal delivery, 9.7% (n = 29) had instrumental delivery, while 30% (n = 90) had cesarean section. More than half of the women 57.7% (n =173) were non breast feeding women while 42.3% (n = 127) were breast feeding women. Finally the majority of women 94.7% (n =284) had no past history of depression while 5.3% (n = 16) had past history of depression.

Table 1: Characteristic of active-duty military women utilizing health care services

variables	Freq	%
Parity		
Primi	86	28.7
Multipar	214	71.3
Marital status		
Married	299	99.7
Divorced	1	.30
Women's educational level		
Bachelor degree	168	56.0
Diploma degree	128	42.7
High School	4	1.3
Monthly income/JD		
< 300 JD	19	6.3
301-400 JD	66	22.0
401-500 JD	75	25.0
> 500 JD	140	46.7
Job title		
Nursing staff	228	76.0
Other health professions	39	13.0
Non-health professions	33	11.0
Military rank		
Enlisted	21	7.0
Officer	279	93.0
Living with		
Independent house	234	78.0
Husband's family	60	20.0
Woman's family	6	2.0
Working in shifts		
Yes	211	70.3
No	89	29.7

Table 1 continue

variables	Freq	%
Husband is military		
Yes	174	58
No	126	42
Age of the baby		
< 4 months	110	36.7
Between 4-7 month	80	26.6
Over 8 month	110	36.7
Planning of pregnancy		
Yes	199	66.3
No	101	33.7
Mode of delivery		
Vaginal delivery	181	60.3
Instrumental delivery	29	9.7
Cesarean section	90	30.0
Gender of baby		
Male	147	49
Female	153	51
Have previous depression		
Yes	16	5.3
No	184	94.7
Breast feeding		
Yes	127	42.3
No	173	57.7

4.3 Psychosocial Variables

4.3.1 Postpartum Depression

Edinburgh Postnatal Depression Scale (EPDS) Arabic version was used to measure postpartum depression among the participated women**.** The descriptive analysis showed that the mean score for women was 15.20 (SD = 5.5), about 25% of the participants had a score of 11 or below and 25% had a score of 19.0 or above, indicating that 50% of women had a score between 11-19 which indicated that women had mild to moderate level of postpartum depression (see table 2).

Table 2: Psychosocial variables among the active-duty military women utilizing health care services

Variable	**M**	**SD**	P_{25}	P_{50}	P_{75}	**Min**	**Max**
Postpartum depression	15.20	5.58	11.0	15.0	19.0	2.0	29.0
Perceived social support	57.56	13.09	49.0	58.5	68.0	21.0	84.0
Perceived stress	42.21	12.32	35.0	45.0	51.0	5.0	71.0

Also, as shown in table 3, the analysis reported that about 17.4% (n = 52) of the women had no symptoms of postpartum depression, while 39.3% (n = 118) had mild level of postpartum depression, 27.6% (n =83) had moderate level of postpartum depression, and 15.7(n = 47) had severe level of postpartum depression.

Table 3: Levels of postpartum depression among active duty military women utilizing health care services

Postpartum depression Levels	**Freq**	**%**
No depression	52	17.4
Mild depression	118	39.3
Moderate depression	83	27.6
Severe Depression	47	15.7

Regarding item analysis of EPDS (see table 4); the analysis showed that women's responses tend to be not extreme and rather centered. For example, women tend to have their responses somewhere between often and sometimes in items 1, 2, 7, 8, and 9. While in items 3, 4, 5, and 6 women responded less often than in previous mentioned items. However, in Item 10 in which women had to respond and express their suicidal ideation (idea of harming self), responses vary with tendency to have about 55% (n = 165) of them women responded as "yes, quite often." furthermore, the mean score for the items correspond with frequency and percentages representing the direction of the responses. The highest mean score ((M= 1.92, SD= .94) was observed for item 6 "In the past week things have been getting on top of me" that reflecting women's perception of their ability to cope. Nevertheless, women had also high mean score ((M= 1.76, SD= .84) for item 4 "In the past week I have been anxious or worried for no good reason" and item 5 "In the last week I have felt scared or panicky for no very good reason" reflecting women perception and irrational feeling of being anxious and panic (M= 1.76, SD= .78). Moreover, item 10 "in the past week, the thought of harming myself has occurred to me" had the lowest mean score (M= .65, SD = .88) reflecting the women low perception and feeling of suicidal ideation.

Table 4: Item analysis of the Edinburgh Postnatal Depression Scale among active-duty military women utilizing health care services

#	Item	Responses									
		n	%	n	%	n	%	n	%	M	SD
1	In the past week I have been able to laugh and see the funny side of things	As much as I always could		Not quite so much now		Definitely not so much now		Not at all			
		53	17.7	168	56	61	20.3	18	6.0	1.15	.78
2	In the past week I have looked forward with enjoyment to things	As much as I ever did		Rather less than I used to		Definitely less than I used to		Hardly at all			
		33	11.0	149	49.7	86	28.7	32	10.7	1.39	.82
3	In the past week I have blamed myself unnecessarily when things went wrong	Yes, most of the time		Yes, some of the time		Not very often		- No, never			
		21	8.0	83	27.7	132	44.0	61	20.3	1.77	.87
4	In the past week I have been anxious or worried for no good reason	No, not at all		Hardly ever		Yes, sometimes		Yes, very often			
		30	10	68	22.7	145	48.3	57	19	1.76	.84
5	In the last week I have felt scared or panicky for no very good reason	Yes, quite a lot		Yes, sometimes		No, not much		No, not at all			
		24	8.0	98	32.7	128	42.7	50	16.7	1.78	.78
6	In the past week things have been getting on top of me	Yes, most of the time I haven't been able to cope at all		Yes, sometimes I haven't been coping as well as usual		No, most of the time I have coped quite well		No, I have been coping as well as ever			
		11	3.7	70	23.7	150	50.0	69	23.0	**1.92**	**.94**
7	In the past week I have been so unhappy that I have difficulty sleeping	Yes, most of the time		Yes, some of the time		Not very often		No, never			
		35	11.7	166	35.0	96	32.0	63	21.0	1.62	.94

Table 4 continue

#	Item	Responses									
		n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**M**	**SD**
8	In the past week I have felt sad or miserable:	Yes, most of the time		Yes, quite often		Not very often		No, not at all			
		75	11.7	112	37.3	94	31.3	59	19.7	1.59	.86
9	In the past week I have been so unhappy that I have been crying	Yes, most of the time		Yes, quite often		Only occasionally		No, never			
		22	7.3	117	39.0	105	35.0	56	18.7	1.65	.86
10	In the past week the thought of harming myself has occurred to me	Yes, quite often		Sometimes		Hardly ever		Never			
		165	55.0	83	27.7	37	12.3	15	5.0	***.65***	***.88***

In regard to suicidal thoughts, women who scored 10 or more on EPDS were tested for suicidal thoughts. The analysis showed that 6% (n=15) of the participated women had suicidal thoughts most of the time, 14% (n=37) reported that sometimes they had suicidal thoughts, 31% (n=77) of women reported that they hardly ever thought of suicide, while around half of women 48% (n=119) reported that they had never thoughts of suicide.

4.3.2 Perception of Social Support

Perception of women's social support was measured using the Multidimensional perception of Social Support Scale (MDPSS). As shown in table 2, the analysis showed that the mean of social support scale was 57.56 (SD= 13.09). The lowest score was 21 while the highest score was 84. Moreover, the results showed that 25% of women had a score of 49.0 or below on the total score and 25% had a score of 68.0 or higher that indicate that 50% of women had a score between 49.0 and 68.0 reflecting high level of perceived social support.

Table 5: Total mean and standard deviation of perceived social support subscales

Perceived social support/ subscale	Min	Max	M	SD
Family support	5	28	19.79	6.05
Friend support	4	28	17.03	5.76
Others support	5	28	20.74	5.69

In addition, the results of descriptive analysis of social support subscale (see table 5), showed that the highest total item means was for others social support (M= 20.74, SD= 5.69), followed by family social support (M= 19.79, SD= 6.05), and the lowest total item mean reported for friends support (M= 17.03, SD= 5.76). The descriptive analysis of social support Items analysis showed that the highest perceived family social support (M= 5.30, SD= 1.74) was reported for the statement" I can talk about my problems with my family" followed by item 4 (M= 5.11, SD= 1.77), "I get the emotional help and support I need from my family". Whereas, the lowest mean of family social support reported for item 11 (M= 4.90, SD= 1.70)." my family is willing to help me make decision).

Regarding friends social support, item analysis showed that the highest mean (M= 4.43, SD= 1.63) was reported for item 9 " I have friends with whom I can share my joys and sorrow". Whereas, the lowest mean of friends social support (M= 4.10, SD= 1.73) was reported for item 7 " I can count on my friends when things go wrong". Finally, for the others social support, item analysis showed that the highest mean (M=5.30, SD= 1.60) for item 5 "I have a special person who is a real source of comfort to me", while the lowest mean (M=5.00, SD= 1.78) was reported for item 1"There is a special person who is around when I am in need". (See table 6)

Table 6: Descriptive statistics of Social support scale

Social support subscales	M	SD	Min	Max
Family social support				
My family really tries to help me	5.30	1.74	1	7
I get the emotional help and support I need from my family	5.11	1.77	1	7
I can talk about my problems with my family	4.60	1.75	1	7
My family is willing to help me make decisions	4.90	1.70	1	7
Friend social support				
My friends really try to help me	4.36	1.60	1	7
I can count on my friends when things go wrong	4.10	1.73	1	7
I have friends with whom I can share my joys and sorrow	4.43	1.63	1	7
I can talk about my problem with my friends	4.13	1.71	1	7
Others social support				
There is a special who is around when I am in need	5.00	1.78	1	7
There is a special person with whom I can share my joys and sorrow	5.15	1.66	1	7
I have a special person who is a real source of comfort to me	5.30	1.60	1	7
There is a special person in my life who cares about my feelings	5.34	1.61	1	7

4.3.3. Perceived Stress

The perception of stress among the participated women was measured using Impact of Event Scale-R. As shown in table 2, descriptive analysis showed that the mean score was 42.21 (SD= 12.3), with lowest score was 5.0 and highest score was 71.0. Moreover, the analysis showed that 25% of women had a score of 35.0 or below and 25% had a score of 45.0 or higher indicating that 50% of women had a score between 35.0 and 45.0 reflecting moderate level of perceived stress, in general. As shown in table 7, in

regards to mean scores of women perceived stress on the subscales, the analysis showed that intrusion subscale had a mean score of 17.31 (SD = 6.1), avoidance subscale had a mean score of 14.17 (SD = 4.6) and hyperarousal had a mean score of 10.72 (SD = 4.1).

Table 7: Total mean and standard deviation of perceived stress subscales

Perceived social support/ subscale	Min	Max	M	SD
Intrusion subscale	2.0	30	17.31	6.1
Avoidance subscale	1.0	27	27.00	4.6
Hyperarousal subscale	0.0	20	10.72	4.1

The descriptive analysis of perceived stress items analysis (see table 8) showed that the highest perceived stress of intrusion (M= 2.36, SD= 1.17) was reported for item 6 " I thought about it when I didn't mean to" followed by item 9 (M=2.35, SD=1.20) " Pictures about it propped into my mind" and the lowest mean score (M=1.92, SD= 1.12) reported for item 1 " any reminder brought back about it" followed by item 3 (M=2.02, SD=1.26) " Other things kept making me think about it". Regarding the avoidance subscale the descriptive analysis showed that the highest mean (M= 2.26, SD= 1.18) was for item 11 " I tried not to think about it", followed by item 13 (M=2.20, SD=1.20) "My feelings about it were kind of numb". The lowest mean (M=1.91, SD=1.13) for item 7" I felt as it hadn't happened or wasn't real" followed by (M= 1.97, SD= 1.16) reported for item 5"I avoid letting myself get upset when I thought about it or reminded of it" 5.30, SD= 1.74) . Moreover, the item analysis of hyperarousal subscale showed that the highest mean (M=2.40, SD=1.13) was reported for item 10" I was jumpy and easily startled" followed by item 15 (M= 2.30, SD= 1.31) "I had trouble falling asleep". Whereas, the lowest mean (M=1.90, SD=1.25) was reported for item 17" reminders of it caused me to have physical reactions such as sweating, trouble breathing, nausea, or pounding heart".

Table 8 : The total item mean and standard deviation of Stress subscales

IES-R item	M	SD
Intrusion Items		
Any reminder brought back about it	1.92	1.12
I had trouble staying asleep	2.16	1.26
Other things kept making me think about it	2.02	1.15
I thought about it when I didn't mean to	2.36	1.17
Pictures about it propped onto my mind	2.35	1.20
I found myself acting or feeling like I was back at that time	2.18	1.22
I had waves of strong feelings about it	2.33	1.25
I had dreams about it	2.02	1.28
Avoidance Items		
I avoid letting myself get upset when I thought about it or reminded it	1.97	1.16
I felt as it hadn't happened or wasn't real	1.91	1.13
I stayed away from reminders about it	1.80	1.21
I tried not to think about it	2.26	1.18
I was aware that I still had a lot of feelings about it, but I didn't deal with them	2.10	1.10
My feelings about it were kind of numb	2.20	1.20
I tried not to talk about it	2.00	1.20
Hyperarousal items		
I felt irritable and angry	1.12	1.20
I was jumpy and easily startled	2.40	1.13
I had trouble falling asleep	2.30	1.31
Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart	1.90	1.25
I felt watchful and no guard	2.10	1.14

4. 4 Relationship among psychosocial variables

The second question was attempting to examine if there is a relationship between socio-demographic variables, perception of social support, and level of perceived stress and postpartum depression among active-duty Jordanian military women utilizing health care services. First, the relationship examined among the psychosocial variables using the Pearson correlation coefficient (*r*). The analysis showed that (see table 9), that there was significant and positive correlation between perception of stress and postpartum depression ($r = .58$, $p < 0.01$) indicating that those with higher level of perception of stress are more likely to have higher scores of postpartum depression. Also, the analysis showed a negative correlation between postpartum depression and perception of social support ($r = - .37$, $p < 0.01$) indicating that those women with higher level of social support are more likely to express lower symptoms of postpartum depression. Moreover, perception of social support had negative relationship with perceived level of stress ($r = - .22$, $p < 0.01$) indicating that military women with higher level of perceived social support are more likely to had lower perception of stress. In general, social support plays significant role in lowering symptoms of postpartum depression and stress among the participated women.

Table 9: Relationship among psychosocial variables and postpartum depression

Variables	Postpartum Depression	Perceived social support	Perceived stress
Postpartum depression	-	- .37*	.58*
Perceived social support		-	- .22*
Perceived stress			-

- Correlation is significant at 0.01 levels

This study aims to identify the strongest predictors of the psychosocial variables and their sub scales, an additional analysis was done to examine the correlation between postpartum depression and the subscales of the Multidimensional perceived social Support Scale (MDPSS) and Impact Event Scale- Revised (IES-R). As shown in table 10, The analysis showed that there is a significant and negative correlation between postpartum depression and the perceived social support from others, friends and family; (*r* = - .30, *r* = - .12, *r* = - .41 respectively). This means that those women receiving inadequate family, friends and others support are more likely to develop high level of postpartum depression. Also, the analysis showed that there is a significant and positive correlation between postpartum depression with intrusion, hyper arousal, and avoidance subscales of IES-R; (*r* = .62, *r* = .55, (*r* = .25, respectively). This means that women who perceive more level of stress are more likely to develop arousal symptoms and avoidance behaviors to combat the perceived stress.

Table 10: Relationship between postpartum depression and the subscales of MDPSS and IES-R

Variables	**PPD**	**Perceived social support**			**Perceived stress**		
		Others	**Friend**	**Family**	**Hyper arousal**	**Avoidance**	**Intrusion**
PPD	-	- .30*	- .12*	- .41**	.55**	.25**	.62**
Others		-	.21**	.56**	.23**	- .11*	- .21**
Friend			-	.24**	-.001	.08	.04
Family				-	- .31**	-.08	- . 31**
Hyperarousal					-	.50**	.74**
Avoidance						-	.38**
Intrusion							-

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

PPD: postpartum Depression

4.5 Relationship between socio-demographic variables and postpartum depression among active-duty military women utilizing health care services

To identify the relationship between socio-demographic variables and psychosocial variables; postpartum depression, perceiving social support, and perception of stress among active- duty military women utilizing health care services, Pearson correlation was used with continuous variables and ANOVA and t-test were considered for ordinal variables to test for differences. As shown in table 11 , the analysis showed that postpartum depression had significant and negative correlation with women's age and age of the baby (r = -.170, r = - .154, respectively). Perception of stress and perception of social support had positive and significant correlation with women's age ($p < .05$). Finally, perception of stress had negative and significant correlation with the age of the baby ($p < .05$).

Table 11: Relationship between socio-demographic variables and psychosocial variables among active-duty women utilizing health care services.

Variables	Postpartum Depression	Perception of Social Support	Perception of Stress
Age	-.170*	.045	.071
Age of the baby	-.154**	.030	-.030

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

The third secondary question attempted to investigate if there are differences in postpartum depression, perception of stress, and perception of social support in relation to socio-demographic variables among active-duty Jordanian military women utilizing health services, t- test used to investigate the difference in postpartum depression in regards to parity (primi versus multi), military rank (enlisted versus officers), gender of baby (male versus female), planning of pregnancy (planned versus not planned). While ANOVA test was used to find differences in regard to educational level, job title, and mode of delivery.

Table 12: Difference in postpartum depression among active-duty military women utilizing health care services

Variables			n	M	SD	t-test	p-value
Postpartum depression	Parity	Primi	86	14.95	4.87	- .49	.620
		Multi	214	15.30	5.86		
	Military rank	Enlisted	21	15.76	4.26	.47	.640
		Officers	279	15.16	5.68		
	Gender of baby	Male	147	14.59	5.60	- 1.85	.065
		Female	153	15.79	5.52		
	Planning pregnancy	Yes	199	14.70	5.39	- 2.20	.028
		No	101	16.20	5.86		
	Breastfeeding	Yes	127	14.31	5.39	- 2.34	.020
		No	172	15.84	5.65		

As shown in table 12, the analysis showed that there were no significant differences in postpartum depression between primipara military women and those who are multipara ($p > 0.05$) although mean score for primi women were less than multipara. In addition, no significant difference found between military women who are ranked as enlisted and those ranked as officers ($p > 0.05$) despite higher mean score of postpartum depression for enlisted that for officers. Also the analysis showed no significant difference between military women who delivered male baby and those who have female babies ($p > 0.05$) although those who delivered female babies had higher mean score of postpartum depression that those who delivered male babies.

However, there was a significant difference in postpartum depressive symptoms between military women who have planned pregnancy and those have not ($t = - 2.20$, $p = .028$) with higher mean score for those who have not planned their pregnancies. However, there was a significant difference in postpartum depressive symptoms between military women who breastfeed their delivered babies and those are not (t = -

2.34, p = .02) with significant higher mean score for those who not breastfeed their delivered babies than those who are breastfeed their babies. Regarding the difference in postpartum depression in relation to education, job title and mode of delivery, the analysis (see table 13) showed that there was a significant difference in postpartum depression between military women in relation to level of education and mode of delivery (p<0.05), while no significant difference in relation to women's job title (p>0.05).

Table 13: Difference in postpartum depression in regards to selected demographic variables among active-duty military women utilizing health care services

Variables			**n**	**M**	**SD**	**F**	**p-value**
Postpartum depression	Education Level	School education	4	18.50	5.06		
		Diploma	128	16.07	5.67		
		University level	168	14.47	5.40	3.75	.025
	Job title	Staff Nurse	228	15.17	5.59		
		Other health professionals	39	16.67	5.49	2.51	.082
		Non-health professional	33	13.73	5.67		
	Mode of Delivery	Normal	181	14.30	5.2		
		Normal with forceps	14	12.14	3.98	8.58	< .011
		Normal with vacuum suction	15	19.13	6.40		
		Cesarean section	90	16.83	5.75		

With regard to the level of education, post Hoc comparison (Tukey test) showed that the significant difference was observed between those who have diploma degree and those who have university degree with the highest mean score observed for military

women with school education and the lowest observed for the military women with university degree. Regarding mode of delivery, post Hoc comparison (Tukey test) showed that the significant difference observed between those who had normal delivery and those with instrumental delivery (either normal with forceps or normal with vacuum suctioning), although the highest mean score of postpartum depression observed among military women who delivered with vacuum suctioning and the lowest among those delivered with forceps.

Moreover, the analysis showed that military women who work as nurses or as health professional or non-health professional have no significant difference in their postpartum depression scores. The analysis showed that non-health professional has the lowest postpartum depression score while staff nurses had lower score than other health professionals.

4.6 Predictors of Postpartum Depression among active-duty military Women utilizing health care services

The fourth research question was attempting to examine the strongest predictors of postpartum depression using the psychosocial (perception of social support and perception of stress) and selected socio-demographic variables (age, parity, gender of child, income, planning of pregnancy, and mode of delivery). Two-step hierarchal regression analysis was used to answer this research question. This type of analysis used to assess the ability of sets of independent variables to predict the dependent variable, and to assess the relative contribution of each model of variables in predicting outcome variables after controlling the previous variables. To ensure meeting of all assumptions for the used analysis; the variables were tested for outliers, multicollinearity and homoscedasticity.

As shown in table 14, the analysis showed that model 1 that included the selected socio-demographic variable ; age, parity, gender of child, period of child birth, monthly income, planning of pregnancy, and mode of delivery explained 16% (R^2 = .16) of the variance in postpartum depression. In this model, women age (**β** = - .28, p<.001), parity (**β** = .78, p<.01), monthly income (**β** = - .76, p<.001, planning of pregnancy (**β** = 1.86, p<.005), and mode of delivery (**β** = 1.06, p<.005) were significant predictors of postpartum depression. This indicates that younger military women, multipara military women, military women with low monthly income, military women who have not planned their pregnancy, and those with instrumental or cesarean section are more likely to develop postpartum depression. On other hand, gender of child and the age of the baby were not significant predictors of postpartum depression.

In model 2, the psychosocial variables that include perception of social support from family, perception of social support from friends, perception of social support from others, hyperarousal, intrusion and avoidance strategies were added. The analysis showed that (see table 12) R^2 changed from .16 to .52, which explained 52% (R^2= .52) of the variance in postpartum depression. In model 1, age, parity, monthly income, planning pregnancy, and mode of delivery were significant predictors. While in model 2, monthly income, planning of pregnancy and mode of delivery remained significant predictors of postpartum depression and women age and parity were not in the inclusion of psychosocial variables.

Table 14: Regression analysis of postpartum depression on socio-demographic and psychosocial variables among active-duty military women utilizing health care services

Variables	Model 1		Model 2	
	β	**ρ-value**	**β**	**ρ-value**
Age	-.28	.001	-.09	.140
Parity	.78	.010	.01	.940
Gender of child	.66	.270	-.45	.330
Age of the baby	-.38	.290	-.34	.220
Monthly income	-.76	.020	-.54	.030
Planning of pregnancy	1.86	.005	1.40	.006
Mode of delivery	1.06	<.001	.77	<.001
MDPSS- Oth			-.05	.240
MDPSS-Fr			-.04	.250
MDPSS- Fa			-.13	.007
IES-R-Hy			.21	.010
IES-R- Av			.02	.690
IES-R- In			.37	<.001

Model	R	R^2	Adjusted R^2	R^2 change	ρ-Value
Model 1	.40	.16	.14		<.001
Model 2	.72	.52	.50	.36	<.001

MDPSS- Fa: Multidimensional Perception of Family Social Support

MDPSS-Fr: Multidimensional Perception of Friends' Social support

MDPSS-Oth: Multidimensional Perception of Others Social support

IES-Hy: Hyper arousal Subscale of Impact of Event Scale

IES-Av: Avoidance subscale of Impact of Event Scale

IES-In: Intrusion subscale of Impact of Event Scale

In model 2, family social support (**β** = - 0.13, p<.005), hyperarousal (**β** = .21, p<.005) and intrusion (**β** = .37, p<.0005) were significant predictors of postpartum depression among military women. This indicates that military women with higher level of perceived social support from family and report higher level of hyperarousal and

instrusivity are more likely to develop postpartum depression. Furthermore, these psychosocial variables increased significantly the prediction power of postpartum depression form .16 to .52 (R^2 change = .36) that emphasize the prediction power of these psychosocial variable of postpartum depression. Stress subscale play significant role as risk factors in developing postpartum depression, while perceived social support from family plays a significant role in protecting against developing postpartum depression.

In specific, the role of stress subscales has been of greater influence on the prediction power of postpartum depression among military women. Two of three subscales were significant predictor for postpartum depression compared to one subscale of the perceived social support. In conclusion, stress is a powerful predictor of postpartum depression than perceived social support. Finally, in the two models, the strongest predictors among all variables were planning of pregnancy (β = 1.4), mode of delivery (β = .77), and intrusion behaviors of perception of stress (β = .37).

4.7 Summary

Data collected from 300 active-duty Jordanian military women utilizing health care services revealed that about 83% of the military women had mild to severe symptoms of postpartum depression, and 15.7 % of them had severe symptoms of postpartum depression. However, in general, military women had mild to moderate level of postpartum depression, high level of perceived social support and moderate level of perceived stress. In addition, about 55% of the military women have feeling of suicidal ideation quite often. Regarding the relationship between the psychosocial variables and postpartum depression, the analysis showed positive correlation with stress and negative one with social support. This was also applied to subscales of both psychosocial variables. Women age and age of the baby were also correlated negatively with

postpartum depression and only difference was only detected in postpartum depression between military women who breastfeed and those who are not, and in relation to level of education and mode of delivery. All other demographics were not correlated significantly with postpartum depression and no significant difference found between sub-categories of the other selected demographic characteristics.

Regarding prediction and prediction power of postpartum depression, the analysis showed that stress was stronger predictor of postpartum depression, while perceived social support were stronger protective factors against postpartum depression. Only planning pregnancy, mode of delivery and monthly income, were significant predictors for postpartum depression among all selected demographic characteristics.

CHAPTER FIVE

DISCUSSION

5. Introduction

The purposes of the current study were to: explore the prevalence of postpartum depression among active-duty Jordanian military women utilizing health services, examine the relationships among socio-demographic variables, and psychosocial variables (perceived social support, and perception of stress) and postpartum depression, and determine the stronger predictors of postpartum depression among active-duty Jordanian military women utilizing health care services.

5.1 Postpartum Depression among active-duty Jordanian military women utilizing health care services.

In the current study, the results indicated that 39.3% had mild level of postpartum depression, 27.6% had moderate level of postpartum depression, and 15.7% had severe level of postpartum depression. The results in this study showed that military women in Jordan had little higher postpartum depression during postpartum period that in other international study. For example, Rychnovsky and Beck (2006) reported that 50% of American military women had significant symptoms of PPD, while Appolonia & Fingerhut (2008) reported 20% and O'Boyle; et al (2005) reported 19%. This may question the high prevalence of postpartum depression among the Jordanian military women. The high prevalence can be explained in terms of interaction between culture and nature of duty work of military women. Military women are exposed to different work assignments such as uncertainty of duty work (military assignment), military style of decision making, and long time duty hours. Military women are exposed to lack of the chance to choose when and what to work in terms of future planning.

In the Arab countries the prevalence was also less than what has been reported in this study. It has been reported that 22.1% of Emirate women had symptoms of Postpartum depression (Green, Broom, & Mirabella, 2006), 26% and 16% among Bekaa valley and Beirut women (Chaaya et al, 2002), and 21% among Moroccan women (Alami, Kadri, & Berrada, 2006). Considering that among non-military Jordanian women, the prevalence of postpartum depression ranged from 26.6% (Oweis, 2001) to 40% (Salameh, 2006).

The nature of military services influences women's life and family styles. This is expected to influence women ability to manage life hazards and stressful life events. Pregnancy and delivery might be considered pleasurable life events, but when it comes to physiological and psychosocial demands, women much need to enhance here psychological capacity to manage stressors. One of the significant finding of this study is the role o social support in postpartum depression. This study found that there is negative association between all subscales of perceived social support and postpartum depression and that perceived social support from family is strong protective factor against postpartum depression. This emphasizes the need to create a supportive family, friend, and community social support during pregnancy and postpartum period. In addition, the study found that stress was very strong risk factor in developing postpartum depression that also emphasize the role enabling military women during pregnancy and postpartum period to enhance their abilities to manage anxiety and psychological and physiological stressors.

This study also revealed that 6% of the military women reported that they had suicidal thoughts (harming self or infant). Compared to international studies, the prevalence of suicidal thought was lower in this study. For example, O'Boyle, and associates (2005) reported that 15% of the military women had suicidal ideation. One

explanation is that this study was conducted on Jordanian military women not sharing in field battles. This may infer that active- duty military women in Jordan may have similar experience of postpartum period to those in general population and that birth rate and pregnancy is not an obstacle for the Jordanian military women compared to those in non-Arab countries. Particularly, the results showed lack of association between postpartum depression and military factors; rank and military job.

5.2 Correlates of Postpartum Depression in relation to socio-demographic variables, perception of social support, and perceived stress

Question two of this study intends to explore the correlations among the socio-demographic variables, social support, perception of stress and postpartum depression among the military women. In the current study, the results revealed that there is significant correlation between postpartum depression with, educational level, planning of pregnancy, mode of delivery and breastfeeding. These results reflect the fact that women with, high level of education and planned pregnancy have no or low score of postpartum depression. This is consistent with Green, Broome, and Mirabella, (2006), and Chaaya, et al (2006), Also, significant correlation between breastfeeding and postpartum depression was revealed, breastfeeding mother may have satisfied mother-child relationship which positively improve the women emotional status and protect self against postpartum depression. This finding is consistent with results reported by Green, Broome, and Mirabella, (2006). This result implies the significant roles of health care providers in providing information about breastfeeding effects on preventing postpartum depression which rely on satisfied mother-child relationship.

Also, the results reported that women experienced instrumental and cesarean section deliveries are significant to develop postpartum depression; the findings comparable with previous studies Chaaya, et al (2006), and could be explained that

women who experiencing childbirth trauma during delivery process may continue to suffer from this trauma at the postpartum period. This implies the significant roles of health care providers in women preinatal preparation with information about childbirth process to alleviate the childbirth associated stressors and decrease their consequences at the postpartum period. Khalaf et al (2007) in their study reported that Jordanian women receive postnatal care related to family planning and child-health care, and during their pregnancy period they don't receive health care services for the methods of childbirth, and child care.

The findings of this study revealed that social support (family, friends, and others) had significant correlation with postpartum depression. This results reported by Green, Broome, and Mirabella (2006), Alami, Kadri, and Berrada (2006), Dinar and Erdogan (2007) and Chaaya et al (2002), Rubertsson, Waldenstrom, Wickberg, Hildingsson, & Radesad (2005). This result implies the important of health care providers in providing social support for postpartum women. Moreover, the results explicit that the interdisciplinary approach in providing health care during postpartum period, is necessary to decrease the symptoms of postpartum depression.

In a meta-analysis study, Beck (2001) reported that, social support has medium effect size (0 .36-0.46) in the development of postpartum depression. Also, the socio-demographic variables have small effect size (0.17 - 0 .36) in the development of postpartum depression. In this study, breastfeeding, educational level, and mode of delivery had significant correlation with the development of postpartum depression among the participants. The results of this study consistent with reported data by Beck (2001) in her meta-analysis study. Beck (2001) reported that women's perception of life stressors during postpartum period have medium effect size on the development of postpartum depression. The results of this study reported that the perception of stress by

the participants in the postpartum period had significant correlation with the development of postpartum depression. These results are consistent with Beck's (2001), Oweis, (2001), Salameh (2006), Alami, Kadri, and Berrada (2006), Kim, Hur, Kim, & Shin (2008).

The current study reported that women are using avoidance and intrusion behaviors at their postpartum period. These stressors may come from military work status, child care, and family care which would be a result of inappropriate antenatal preparation. To help women to overcome these stressors, health care providers have to promote appropriate and comprehensive antenatal health care program in the context of women wholeness as reported by Beck, (2001).

The finding also reported that women receiving adequate social support from their families experience low level of postpartum depression. This would be explained in the context of Jordanian cultural and traditional practices. These practices are common; where family provides social support to women early after childbirth which may extend to 30 days or more include child care, family care, and self care. Child care that provided by the family will decrease mother's fears about physical child care and emotional concern. Furthermore, this will help the mother to fulfill their family and self needs in well supported conditions.

5.3 Predictors of Postpartum depression

The study aims to explore the strongest predictors of postpartum depression among active-duty Jordanian military women utilizing health care services. Two models have the variables which are significant in predicting postpartum depression. In model 1 parity, monthly income, planning of pregnancy and mode of delivery were the stronger predictors of postpartum depression which explained 16% of variance among active-duty military women utilizing health services. In model two three of the socio-

demographic predictors remained significant in the prediction of postpartum depression (monthly income, planning of pregnancy, and mode of delivery). These socio-demographic variables were correlated to the development of postpartum depression as reported by O'Hara, Arndt, & Stuarts (2007), Chaaya et al (2002). Additionally, three predictors of psychosocial variables were significant in predicting postpartum depression which all explained 52% of variance among Jordanian military women. Based on the results of this study, it is clearly stated that the mode of delivery (instrumental delivery or cesarean section) were strong predictors of postpartum depression among the participants. This implies that women have to receive antenatal information about the different delivery modes, will experience lessened perception of stress and decreased the development of postpartum depression.

Moreover, planning pregnancy by the participants is significant in decreasing pregnancy depression which may extend to the postpartum depression which could have negative effects on mother-child relationships, family relationship, and partners' relationship. For that, antenatal health cares programs have to discuss with couples the significant effects of planning pregnancy in maintain the integrity of women-psychosocial status and child development that fitting Jordan traditional and cultural concerns.

This study has generated information that may help identify the postpartum depression among active-duty Jordanian military women and the predictors for the development of postpartum depression. The results of this study indicate a need for establishing a mental health referral system to support the women during their reproductive period which is significant in the improvement of the quality of health for military women and increase the quality of work.

5.4. IMPLICATIONS

This is the first study examining the psychosocial predictors of postpartum depression among active-duty Jordanian military women utilizing health care services. Based on the results of this study, there are important implications for nursing practice, nursing education, nursing research, and nursing administration.

5.4.1 Nursing Practice

1- Health care providers have important roles in the prevention of, identification of, and management of postpartum depression among Jordanian military women through the utilization of evidence-based practices at health care settings.

2- Planning comprehensive interventional caring programs reflecting Jordanian military women's needs during their childbirth period and reproductive life is essential.

3- Developing proper screening techniques for early detection of postpartum depression and prediction of risk factors.

5.4.2 Nursing Education

1- Nurse educators should integrate concepts related to the psycho-social and mental health aspects of Jordanian childbearing women.

2- Nurse educators should integrate the concepts of postpartum depression in their nursing curricula.

3- Develop and implement culturally sensitive continuing education programs for health care providers including the consequences of postpartum depression on women, family, and society based on evidence-based practices.

5.4.3 Nursing Research

Further studies could be conducted to identify the correlation between postpartum depression and other psychosocial predictors; prenatal/pregnancy depression, self-

esteem, child care stress among active-duty Jordanian military women utilizing health care services.

5.4.4 Health Administration

Based on the results of this study, decision makers and policy development committee at the military health care settings;

1- Set special policies and regulations of reproductive health for Jordanian military women at the primary, secondary, and tertiary level of care.
2- Utilize the information of this study to improve the quality of care provided to military women through their reproductive period of life.
3- Design programs specifically for Jordanian military women that are woman and family centered that prevent and manage postpartum depression and improve the health and well being of these women.

5.5 Limitation of the Study

1- Results of this study could only be generalized to active- duty military women utilizing health services serving at Jordan Armed Forces with normal baby and within one year of giving birth.
2- The lack of a referral plans for those women who have depression or had suicidal thoughts.
3- This study uses retrospective cross-sectional design which doesn't draw causal relationship among the variables under the study.

In spite of these limitations, this study adds to mental health literature by being the first study of postpartum depression among Jordanian military women.

5.6 Study Recommendations

1- Further longitudinal prospective studies are recommended to identify Perinatal mood disorders across the childbearing year.

2- Interventional studies are recommended for early management of Perinatal mood disorders in order to maintain women's mental health, enhance the development of quality mother-child relationship, and maintain healthy family function.

5.7 Study conclusion

The study confirmed that active- duty military women serving at Jordan Armed Forces had high prevalence of postpartum depression which explicit the importance of developing proper screening techniques for early detection of postpartum depression. On the other hand, psychosocial variables were the stronger predictors of postpartum depression among the participants which imply the significant roles of psycho-social health providers and the multidisciplinary teams work in the management of the risk factors. Also, the study highlights importance of family support in for those women to decrease their symptoms of postpartum depression.

Furthermore, the perception of high level of stress in the postpartum period has significant effects on the development of postpartum depression which reflects the need for psychological counseling of those women who experienced these stressors. Finally, postpartum depression among active-duty military women utilizing health care services is an aspect that should be considered when designing health programs that prevent and manage postpartum depression and improve the health and well being of these women in the context of wholeness.

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Appendices

Appendix A

Permissions

الجامعة الأردنية
THE UNIVERSITY OF JORDAN

رئاسة الجامعة
University Administration

الرقم ٨/١/٢٢٦٦
التاريخ: ٢/٦/١٤٣١هـ
الموافق: ١٧/٦/٢٠١٠م

عطوفة مدير عام مديرية الخدمات الطبية الملكية

الموضوع: تسهيل مهمة

تحية طيبة وبعد،،،

فأرجو إعلامكم بأن الطالبة "دلال بشير محمد" من طلبة برنامج الدكتوراه في كلية التمريض بالجامعة الأردنية تقوم بإعداد أطروحة بعنوان:

"Psychosocial Predictors of Postpartum Depression among Jordanian Military Women"

وتحتاج إلى تطبيق أداة دراستها على النساء في عيادات النسائية والأطفال التابعة للمستشفيات العسكرية التالية :-

- مستشفى الحسين .
- مستشفى الملكة رانيا العبدالله .
- مستشفى الأمير هاشم بن الحسين

أرجو التكرم بالموافقة والإيعاز للمعنيين لديكم بتسهيل مهمة الطالبة المذكورة أعلاه .

وتفضلوا بقبول فائق الاحترام ،،،

/رئيس الجامعة
نائب الرئيس لشؤون الكليات و المعاهد العلمية

الدكتور ضياء الدين عرفه

ب.ا

هاتف: ٥٣٥٥٠٠٠ (٦-٩٦٢) فاكس: ٥٣٥٥٥١١ (٦-٩٦٢) عمان ١١٩٤٢ الأردن
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بسم الله الرحمن الرحيم

G. H. Q. Jordan Armed Forces
DIRECTORATE
ROYAL MEDICAL SERVICES
Director of Professional Training
and Human Resources Development
Amman – Jordan

القيادة العامة للقوات المسلحة الأردنية
مديريـــــــة
الخدمـــات الطبية الملكيـــة
مديرية التأهيل الفني وتنمية القوى البشرية
عمان – الأردن

الرقــم : ت ف ١/٣/أ/ ٤٢٤٢
التاريخ : رجب ١٤٣١
١٢ تموز ٢٠١٠

الجامعـــه الاردنيـــــه

الموضوع : الدراسات

الاشارة كتابكم رقم ٣٣٦٦/١/٨ تاريخ ٢٠١٠/٦/١٣

١. اوصت لجنة البحوث والدراسات السريريه والدوائيه وأخلاقيات المهنه بأجتماعها الذي عقد بتـاريخ ٢٠١٠/٧/٦ بالموافقه على اجراء دراسه بعنوان **Psychosocial Predictors of postpartum depression among Jordanian Military Women** في مستشفيات الخدمات الطبيه الملكيه من قبل العقيد ممرضه دلال البشير .

٢. لإجراءاتكم لطفـــاً .

واقبلوا فائق الاحترام،،،،،

عـ/ اللواء الطبيب
مدير عام الخدمات الطبية الملكيـــة
النقيب عبدالله عقله البداريـــن

نسخه الى :

- مستشفى الحسين
- مستشفى الامير هاشم بن الحسين
- مستشفى الملكه رانيا العبد الله للأطفال
- مدير التأهيل الفني وتنمية القوى البشرية
- رئيس الدائرة المالية
- رئيس شعبة أمن الخدمات الطبية الملكية
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فاكس : ٥٣٤٧٤٨٥-٦-٩٦٢ ، تلفون: ٥٨٠٤٨٠٤ فرعي ٤٣٤٢/٤٣٤١/٤٣٧٣ ، ص.ب ١٢٢ ضاحية الأمير راشد، عمان ١١٨٣١ الأردن .

عزيزتي المشاركة

أنا الطالبة دلال بشير محمد ، طالبة دكتوراة في الجامعة الاردنية كلية التمريض. ارغب في اجراء دراسة حول المتنبئات النفسية والاجتماعية ودورها في حدوث الاكتئاب ما بعد الولادة لدى النساء المجندات في القوات المسلحة الاردنية .

عنوان الدراسة:" المتنبئات النفسية والاجتماعية لاكتئاب ما بعد الولادة لدى النساء المجندات في القوات المسلحة الاردنية.

عزيزتي المشاركة كلي امل ان تساهم نتائج هذا البحث في الكشف عن المسببات النفسية والاجتماعية التي تؤدي الى الاكتئاب ما بعد الولادة وذلك لتحسين الرعاية الصحية المقدمة للهؤلاء النساء. وبناء على ذلك ارجوا منك اعطاءنا بعضا من وقتك لملئ الاستبيان وبعد قراءة التعليمات.

عزيزتي المشاركة اذا قررت تعبئة الاستبيان ارجوا منك الاجابة على جميع الاسئلة. كما ارجو وضع الاستبيان بعد اجابته في الظرف المزود لهذا الغرض والتأكد من اغلاقه واعطاءه للباحث. كما اؤكد لك ان مشاركتك اختيارية وبدون مقابل وانك تستطيعي الانسحاب من الدراسة في اي وقت. كذلك ان جميع الاجابات ستعامل بسرية تامة، كما واتعهد كباحث بالمحافظة على خصوصيتك حيث انه لا يتطلب منك ذكر الاسم على الاستبيان او اي شيء يدل على المشاركة وان جميع الاستبيانات سوف يتم فتحها من قبل الباحث فقط.

عزيزتي المشاركة ارجوا منك الاستفسار او توجيه الاسئلة التي تساعدك في تعبئة الاستبيان او عن نتائج الدراسة بالاتصال بي على الرقم التالي (0777762120)

الباحثة: دلال بشير محـــــــمد

الخدمات الطبية الملكية

هاتف: 5840840 فرعي 64349

البريد الالكتروني: yehia_dalal@hotmail.com

عزيزتي المشاركة لك جزيل الشكر على مشاركتك

نموذج موافقة على المشاركة في دراسة

عنوان البحث : معدل اكتئاب ما بعد الولادة والمتنبئات النفسية والاجتماعية لاكتئاب ما بعد الولادة لدى النساءالمجندات في القوات المسلحة الاردنية

الباحث الرئيسي : طالبة دكتوراة دلال بشير محمد

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كلية التمريض- الجامعة الاردنية

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a.mansour@ju.edu.jo

هدف الدراسة:-

تهدف هذه الدراسة الى التعرف على المتنبئات النفسية والإجتماعية لإكتئاب ما بعد الولادة لدى النساء المجندات في القوات المسلحة الاردنية. وستساهم هذه الدراسة في تحسين الرعاية النفسية والإجتماعية المقدمة للامهات في فترة ما بعد الولادة وتزويد صانعي القرار بمؤشرات حيوية تساعد في اخذ القرارات المناسبة لتحسين الجوانب النفسية والإجتماعية في فترة ما بعد الولادة للنساء العاملات في القوات المسلحة الأردنية.

من هم المستهدفين في هذه الدراسة:-

عزيزتي المشاركة ادعوك للموافقة على المشاركة في هذه الدراسة والتي تشمل النساء المجندات في القوات المسلحة الإردنية واللواتي انجبن اطفالا خلال سنة ماضية.

ما المطلوب منك خلال الدراسة؟

المطلوب منك هو بعد موافقتك المشاركة ان تجيب على اسئلة استمارة الدراسة التي سيقدمها الباحث والتي تتطلب (25-30) دقيقة من وقتك. ومنها اسئلة تتعلق بالمتنبئات النفسية والإجتماعية لإكتئاب ما بعد الولادة

هل موافقتك في الدراسة اختيارية طوعية؟

عزيزتي المشاركة لك الحق بالموافقة او عدم الموافقة على المشاركة في الدراسة ان شئت، واذا غيرت رايك وقررت الانسحاب بعد المشاركة فيمكنك الانسحاب، وفي اي وقت دون اي مسؤولية تذكر ولن تسأل عن السبب مهما كان وستتمتعي بنفس الميزات ولن يتأثر وضعك ولن تسأل عن اي شيء.

هل المعلومات في الدراسة المستخدمة سرية:-

كل المعلومات التي سيتم جمعها **ستعامل بسرية تامة** ولن يذكر اسمك على اي من صفحات الإستبانة وستعامل الاستبيانات بسرية تامة من قبل فريق البحث ولن يطلع على هذه الاستبيانات الا فريق البحث ولن تخرج هذه المعلومات لاي كان ومهما كان وستستخدم فقط لغايات الدراسة.

لقد تم توضيح كل النقاط السابقة الذكر لي بشكل مفصل. وفهمت كل المعلومات المذكورة بسهولة. وفهمت ان لي الحق بطرح اي سؤال حول الدراسة في اي وقت كان. وان هذه الاسئلة ستجاب من خلال البحث الرئيسي الموجود اسمه في الصفحة الاولى وكذلك المشرف على البحث.

عزيزتي المشاركة لك الشكر الجزيل لمشاركتك القيمة

Appendix B

البيانات الشخصية (النسخة العربية)

يتكون هذا الجزء من ستة عشرة فقرة ارجو منك الاجابة على جميعها:

الرقم	الفقـــــــــرة	الاجـــابة
1	كم عمرك؟	--------------------- سنة
2	كم مرة حملت؟	-------------------- مرة
3	ما رتبتك العسكرية؟	----------------------
4	ما هي وظيفتك التي تعملين بها؟	-------------------
5	ما تاريخ ميلاد طفلك؟	----------------------
6	ما جنس طفلك؟	------------------------
7	مع من تسكنين؟ 11- أهل الزوج 2- أهل الزوجة 3- مستقلة مع الزوج والاولاد	
8	هل انت؟ 1- متزوجة 2- مطلقة 3- ارملة	
9	مستواك التعليمي؟ 1- مدرسي 2- كلية 3- جامعي	
10	الدخل الشهري للعائلة؟ 1- اقل من 300 دينار 2- 301-400 دينار 3- 401-500 4- اكثر من 500	
11	هل تتطلب وظيفتك عمل بنظام الشفتات (الورديات)؟ 1- نعـــم 2- لا	
12	هل زوجك عامل في الجيش؟ 1- نعـــم 2- لا	
13	هل الحمل مخطط له ؟ 1- نعـــم 2- لا	
14	ما نوع الولادة؟ 1- طبيعية 2- طبيعية بمساعدة الملقط 3- طبيعية بمساعدة الشفط 4- قيصرية	
15	هل تم تشخيصك سابقا بمرض الاكتئاب ؟ 1- نعـــم 2- لا	
16	هل انت مرضعة؟ 1- نعـــم 2- لا	

Appendix C

Socio-demographic Data

(English Version)

This part consists of 16 questions, please answer all of them

1- Age: ( ) years old

2- Military Rank: ( )

3- Job Title: ( )

4- Educational level: School ( ), College ( ), University ( )

5- Monthly Income: < 300 ( ), 301-400 ( ), 410-500 ( ), >500 ( )

6- Living with: Husband's family ( ), your family ( ), independent house ( )

7- Marital status: Married ( ), Divorced ( ) Widow ( )

8- Are you work in shifts: Yes ( ), No ( )

9- Your husband is an active military person: Yes ( ), No ( )

10 - Parity: ( )

11- Date of child birth: / / 2010

12- Planning of pregnancy: Yes ( ), No ( )

13- Mode of delivery: Normal vaginal delivery ( ), normal with instrumental assistance ( ), Cesarean section ( )

14- Sex of your baby: Male ( ), Female ( )

15- Have previous depression: Yes ( ), No ( )

16- Are you breastfeeding: Yes ( ), No ( )

Appendix D

الحالة النفسية للمرأة في فترة النفاس (النسخة العربية)

يتكون هذا الاستبيان من عشر فقرات قصيرة تقيم الحالة النفسية للمرأة في فترة النفاس. ارجو منك الاجابة على جميع الاسئلة وذلك بوضع دائرة حول العبارة التي تصف كيف كان شعورك خلال الاسابيع الماضية:

الرقم	الفقـــــــــــــــــرة	الاجابـــــــــــــــــة
1	كنت قادرة على الضحك ورؤية الجانب المضحك في الاشياء	- كثيرا كالمعتاد- - اقل من المعتاد قليلا - - قطعيا اقل من المعتاد- لا اطلاقا-
2	تطلعت بمتعة لما حولي من الاشياء	- كثيرا كالمعتاد - اقل من المعتاد قليلا- - قطعيا اقل من المعتاد- - لا اطلاقا
3	لمــت نفــسي بـدون داعــي عنــدما كانــت الامــور والاشياء تسير بشكل غير صحي	- نعم معظم الوقت - نعم بعض الوقت - لا ليس كثيرا - لا، ابدا
4	كنت اقلق بدون اي سبب يدعوا للقلق	- لا، اطلاقا - لا ليس كثيرا - نعم، بعض الوقت- - نعم ، دائما
5	شعرت بالذعر والخوف والفزع بدون سبب قوي	- نعم ، بكثرة- - نعم، بعض الوقت - - لا، ليس كثيرا - لا، اطلاقا
6	ازدادت متاعبي واصبحت الامور صعب علي	- نعم، معظم الوقت لم اكن قادرة على التكيف اطلاقا - نعم، بعض الوقت لم اكن قادرة على التكيف كالمعتاد - لا، معظم الوقت كنت قادرة على التكيف بشكل جيد - لا، لقد كنت قادرة على التكيف كالمعتاد-
7	كنت تعيسة لدرجة انني كنت اجد صعوبة بالنوم	- نعم، معظم الوقت - نعم، مرارا - ليس غالبا - لا اطلاقا
8	شعرت بالحزن والتعاسة	- نعم، معظم الوقت - نعم، مرارا - ليس غالبا - لا اطلاقا
9	كنت غير سعيدة لدرجة انني كنت ابكي كثيرا	- نعم معظم الوقت - نعم بعض الوقت - ليس غالبا - لا، اطلاقا
10	راودتني افكار بايذاء نفسي	- نعم، مرارا - بعض الاحيان - نادرا - لا اطلاقا

Appendix E

Edinburgh Postnatal Depression Scale (English Version)

1- In the past week I have been able to laugh and see the funny side of things:

a- As much as I always could

b- Not quite so much now

c- Definitely not so much now

d- Not at all

2- In the past week I have looked forward with enjoyment to things:

a- As much as I ever did

b- Rather less than I used to

c- Definitely less than I used to

d- Hardly at all

3- In the past week I have blamed myself unnecessarily when things went wrong:

a- Yes, most of the time

b- Yes, some of the time

c- Not very often

d- No, never

4- In the past week I have been anxious or worried for no good reason:

a- No, not at all

b- Hardly ever

c- Yes, sometimes

d- Yes, very often

5- In the last week I have felt scared or panicky for no very good reason:

a- Yes, quite a lot

b- Yes, sometimes

c- No, not much

d- No, not at all

6- In the past week things have been getting on top of me:

a- Yes, most of the time I haven't been able to cope at all

b- Yes, sometimes I haven't been coping as well as usual

c- No, most of the time I have coped quite well

d- No, I have been coping as well as ever

7- In the past week I have been so unhappy that I have difficulty sleeping:

a- Yes, most of the time

b- Yes, sometimes

c- Not very often

d- No, not at all

8- In the past week I have felt sad or miserable:

a- Yes, most of the time

b- Yes, quite often

c- Not very often

d- No, not at all

9- In the past week I have been so unhappy that I have been crying:

a- Yes, most of the time

b- Yes, quite often

c- Only occasionally

d- No, never

10- In the past week the thought of harming myself has occurred to me:

a- Yes, quite often

b- Sometimes

c- Hardly ever

d- Never

Appendix F

مقياس اثر الاحداث (النسخة العربية)

أدناه قائمة بالصعوبات التي يختبرها الناس بعد احداث مجهدة بالحياة، الرجاء قراءة كل فقرة واختيار مقدار الاجهاد النفسي وشدة الصعوبة خلال الايام الماضية ، ضعي اشارة (X) امام اختيارك

الرقم	الفقـــــــــــــــــــــــرة	علـــــى الاطلاق	قليلا	بسيط نوعا ما	كثيرا	بشدة
1	تذكير اعاد لي المشاعر التي رافقت الحدث	0	1	2	3	4
2	واجهت صعوبة بالبقاء نائما					
3	الاشياء الاخرى ابقتني افكر بالحدث					
4	شعرت بالاستفزاز والغضب					
5	منعت نفسي من الانزعاج عند التفكير او تذكر الحدث					
6	كنت افكر في الحدث بدون قصد					
7	شعرت وكأن الحدث لم يحدث او انه ليس حقيقي					
8	ابتعدت عن كل شيْ يذكرني بالحدث					
9	صور الحدث لازمتني					
10	كنت مذهولا					
11	حاولت عدم التفكير بالحدث					
12	كنت مدركا لمشاعري المتعلقة بالحدث ولكنني لم اتعامل معها					
13	كانت مشاعري نوعا ما جامدة					
14	وجدت نفسي اتفاعل واشعر كما لو انني عدت اعيش تلك اللحظات					
15	وجدت صعوبة بالخلود الى النوم					
16	شعرت بموجات مشاعر قوية اتجاهه					
17	شعرت بردود الفعل الجسدية عند تذكر الحدث مثل التعرق، صعوبة التنفس، الغثيان وان دقات قلبي سريعة					
18	راودني الحدث في الاحلام					
19	شعرت كالمتربص او المنتظر والمتوقع حدوث امر ما					
20	حاولت عدم التحدث عنه					

Appendix G

Impact of Event Scale (English Version)

Items	**Not at all 0**	**A little Bit 1**	**Moderately 2**	**Quit A Bit 3**	**Extremely 4**
Any reminder brought back about it					
I had trouble staying asleep					
Other things kept making me think about it					
I felt irritable and angry					
I avoid letting myself get upset when I thought about it or reminded of it					
I thought about it when I didn't mean to					
I felt as it hadn't happened or wasn't real					
I stayed away from reminders about it					
Pictures about it propped into my mind					
I was jumpy and easily startled					
I tried not to think about it					
I was aware that I still had a lot of feelings about it, but I didn't deal with them					
My feelings about it were kind of numb					
I found myself acting or					

feeling like I was back at that time					
I had trouble falling asleep					
I had waves of strong feelings about it					
Reminders of it caused me to have physical reaction, such as sweating, trouble breathing, nausea, or a pounding heart					
I had dreams about it					
I felt watchful and no guard					
I tried not to talk about it					

Appendix H

مقياس الدعم الاجتماعي (النسخة العربية)

الرجاء قراءة العبارات التالية وتحديد إلى أي حد توافق من خلال اختيار الأرقام التالية بوضع اشارة(√)

	العبارات	1 لا اوافق بدرجة عالية	2 لا اوافق بشدة	3 لا اوافق بشكل بسيط	4 محايد	5 اوافق بشكل بسيط	6 اوافق بشدة	7 اوافق بدرجة عالية
1	هناك شخص معين يكون بجانبي عند الحاجة							
2	هناك شخص معين استطيع أن أشاركه أفراحي و أحزاني							
3	إن عائلتي تحاول أن تساعدني							
4	احصل على الدعم العاطفي و المساعدة التي احتاجها من عائلتي							
5	يوجد عندي شخص معين يعتبر المصدر الأساسي لتقديم الراحة لي							
6	أصدقائي يحاولون تقديم المساعدة لي							
7	ارتكز و الجأ إلى أصدقائي عند حدوث مشاكل							
8	استطيع التحدث عن مشاكلي مع عائلتي							

							لدي أصدقاء استطيع أن أشاركه أفراحي و أحزاني	**9**
							هنـاك شـخص معـين فـي حيـاتي يهتم بمشاعري	**10**
							عـــائلتي لـــديها الاســتعداد لمساعدتي في اتخاذ قراراتي	**11**
							استطيع التحدث عن مشاكلي مع أصدقائي	**12**

Appendix I

Multidimensional Perception of Social Support

(English Version)

Items	**1 Very strongly disagree**	**2 Strongly Disagree**	**3 Mildly Disagree**	**4 Neutral**	**5 Mildly agree**	**6 Strongly agree**	**7 Very strongly agree**
There is a special person who is around when I am in need							
There is a special person with whom I can share my joys and sorrow							
My family really tries to help me							
I get the emotional help and support I need from my family							
I have a special person who is a real source of comfort to me							
My friends really try to help me							
I can count on my friends when things go wrong							
I can talk about my problems with my family							
I have friends with whom I can share my							

joys and sorrow							
There is a special person in my life who cares about my feelings							
My family is willing to help me make decisions							
I can talk about my problem with my friends							

معدل اكتئاب ما بعد الولادة و المتنبئات النفسية والاجتماعية لدى النساء المجندات في القوات المسلحة الأردنية

إعداد
دلال بشير محمد يحيى

إشراف
الدكتور أيمن حمدان منصور

المشرف المشارك
الدكتورة لين كالستر

ملخص

تهدف هذه الدراسة الى التعرف على معدل إكتئاب ما بعد الولادة والعلاقة بين المتنبئات النفسية والاجتماعية والإكتئاب ما بعد الولادة، ودراسة العلاقة بين المتغيرات الديمغرافية والشعور بالضغط النفسي والدعم الاجتماعي وإكتئاب ما بعد الولادة, وايضا تحديد اقوى المتنبئات لإكتئاب ما بعد الولادة لدى النساء المجندات في القوات المسلحة الاردنية.

تم إجراء الدراسة في اربع مستشفيات عسكرية تابعة للخدمات الطبية الملكية حيث شارك في الدراسة ثلاثمائة امرأة من العاملات في القوات المسلحة واللواتي في السنة الاولى منذ ولادة طفلها ولا يعانين من أية مشاكل صحية أو عقلية. لقد تم جمع المعلومات باستخدام استبيان باللغة العربية يتألف من أربعة اجزاء: الجزء الاول الخاص بالمعلومات الديمغرافية ومعلومات الحمل والولادة، الجزء الثاني يقيس مستوى الإكتئاب ما بعد الولادة، الجزء الثالث يقيس مستوى الضغط النفسي والجزء الرابع يقيس مستوى الدعم الاجتماعي.

أظهرت نتائج الدراسة أن 39.3 % من النساء المشاركات لديهن مستوى ضعيف من اكتئاب ما بعد الولادة و 27.6 % لديهن مستوى متوسط من إكتئاب ما بعد الولادة و 15.7 % لديهن مستوى شديد من اكتئاب ما بعد الولادة. كما اظهرت النتائج ان 50 % من النساء المشاركات لديها دعم إجتماعي فوق المتوسط (Mean, 57.56, SD = 13.09) و أن 50% من النساء المشاركات لديها إدراك حسي أعلى من متوسط الإدراك الحسي للضغط النفسي (Mean, 42.21, SD = 12.32).

لقد أظهرت النتائج علاقة ذات دلالة إحصائية قوية وايجابية بين إكتئاب ما بعد الولادة ومستوى الادراك الحسي للضغط النفسي ($r = .58, p<0.01$) لدى النساء المشاركات، وأن هناك علاقة ذات دلالة إحصائية متوسطة وسلبية لإكتئاب ما بعد الولادة والدعم الإجتماعي ($r = -.37, p<0.01$) بين النساء المشاركات. كما أظهرت الدراسة أن الدخل الشهري و التخطيط للحمل وطريقة الولادة والدعم الإجتماعي من العائلة و منهجيات التفاعل مع الضغط النفسي هي المتغيرات الأقوى في التنبا لإكتئاب ما بعد الولادة R^2 = (.52) ومعدل التغير في ($R^2 = .36$) لدى النساء المشاركات.

لقد بينت هذه الدراسة بأن هناك علاقة بين إكتئاب ما بعد الولادة والمتنبئات النفسية والاجتماعية ، حيث أن الدعم الإجتماعي الكافي وقلة الضغط النفسي في فترة ما بعد الولادة يقلل من فرصة حدوث اكتئاب ما بعد الولادة ، وهذا يبرر الحاجة الى الاخذ بعين الاعتبار أهمية الجانب النفسي والاجتماعي لدى النساء المجندات في القوات المسلحة من خلال إعداد برامج رعاية صحية شاملة خلال فترة الإنجاب تلبي الاحتياجات النفسية والاجتماعية والجسمية.